CITY OF VACAVILLE PLANNING COMMISSION **Agenda Item No. 7.B**
STAFF REPORT **November 19, 2019**

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TITLE: **WELL NO. 17**

REQUEST: **CONDITIONAL USE PERMIT REQUEST TO CONSTRUCT A NEW CITY WELL FACILITY ON A VACANT 0.7-ACRE PARCEL LOCATED AT 201 SNOWY OWL DRIVE (APN 0137-072-040).**

RECOMMENDED ACTION: **ADOPT THE RESOLUTION APPROVING THE CONDITIONAL USE PERMIT FOR WELL NO. 17 AT 201 SNOWY OWL DRIVE, SUBJECT TO THE CONDITIONS OF APPROVAL.**

APPLICATION INFORMATION

APPLICATIONS:	Categorical Exemption and Conditional Use Permit
FILE NO:	File No. 19-199
APPLICANT:	Vacaville Utilities Department
PROPERTY OWNER:	City of Vacaville

PROJECT SUMMARY

The City of Vacaville has received a Conditional Use Permit request to construct a new City Well facility on a vacant 0.7-acre parcel located at 201 Snowy Owl Drive. Pursuant to Section 15332 (In-Fill Development Projects) of the California Environmental Quality Act (CEQA), the project is exempt from environmental review.

PROPERTY INFORMATION

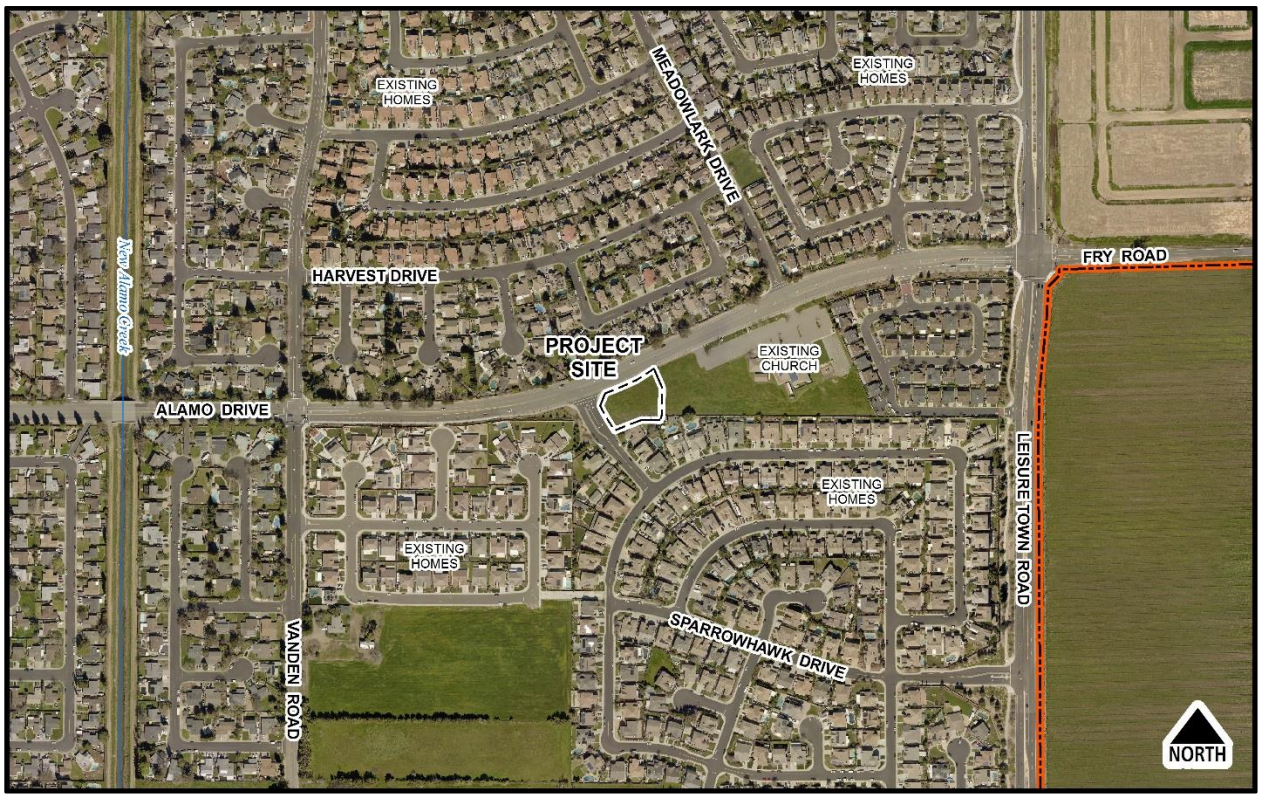
ASSESSOR PARCEL NUMBER:	0137-072-040
LOCATION:	201 Snowy Owl Drive
SITE AREA:	0.7 acres (30,492 sq. ft.)
GENERAL PLAN DESIGNATION:	Residential Medium Density
ZONE:	RM (Residential Medium Density)
SPECIAL DISTRICTS:	None
CURRENT LAND USE:	Vacant
TOPOGRAPHY/NATURAL FEATURES:	Flat, disked land.
ADJACENT ZONING & USE:	North: RL-6 – Alamo Drive & existing homes South: RL-6 – existing homes East: RM – Covenant Community Church West: RL-6 – Snowy Owl Drive & existing homes
ACCESS:	Alamo Drive (4-lane arterial street) & Snowy Owl Drive (local street)

UTILITIES:	Water: Provided by City of Vacaville Sewer: Provided by City of Vacaville Storm: Provided by City of Vacaville Electric: Provided by PG&E.

PROJECT DESCRIPTION

The project proposal is to construct a new City Well facility on a vacant 0.7-acre parcel located at 201 Snowy Owl Drive (SE corner of Alamo Drive and Snowy Owl Drive). The new facility consists of an approximately 1,400 sq. ft. single-story building, 8 ft. tall by 27 ft. long cylinder filter, with an 8 ft. tall tubular steel fence around the perimeter of the site. Primary access is provided on Snowy Owl Drive and a secondary access is provided on Alamo Drive. Figure 1 below shows the project location and nearby land uses.

Figure 1. Proximity Map



PREVIOUS ACTIONS

December 1981
The Vacaville City Council certified the Southeast Sector Environmental Impact Report (EIR) which evaluated and disclosed impacts to biological and archaeological resources at the project site concurrently with subdivision development north of Alamo Drive.

PROJECT ANALYSIS

1. Existing Conditions

The project site is generally flat with vegetation consisting of grasses and weeds. Existing underground utilities including water, power and gas are located on the west to north easterly end of the parcel. The site previously included a City water well which is no longer in use and has been capped. The capped well casing is located in the north eastern end of the parcel. Surrounding land uses include Covenant Community Church to the east, Alamo Drive and single-family homes to the north, single-family homes to the south, and Snowy Owl Drive and single-family homes to the west. Figure 2 below shows the existing condition of the project site as looking to the north towards Alamo Drive.

Figure 2. Existing Project Site Condition

2. Compliance with General Plan

The project site is designated Residential Medium Density in the City's General Plan. This designation provides opportunities for multiple residential uses, including duplexes, duets, and townhouses with a density from 8.1 du/ac to 14.0 du/ac. Although the proposed use (public utility building) is not a residential use, it is conditionally permitted by the underlying Residential Medium zoning district. The following policies are examples of how the project complies with the General Plan. A more detailed description can be found under Exhibit A (Findings of Fact).

A. The project provides a reliable water supply within the City (Goal PUB-10);
B. The project provides a new water supply to meet the City's demands (Goal PUB-11);
C. The project will include landscaping abutting Alamo Drive and residential uses to harmonize with adjoining uses (Policy PUB-P12.5);
D. The proposed building will be compatible with adjoining buildings, and the project will provide buffers between surrounding uses to shield unsightly equipment (Policy PUB-P5.3);
E. The project will complement surrounding neighborhoods (Policy LU-P1.5);
F. The project will provide adequate landscaping (Policy PUB-P5.4);
G. The Applicant will be required to protect any cultural resources that are accidentally discovered during initial ground disturbing activities (Policy COS-P6.4);

H. The Applicant will be required to implement dust control measures during initial grading activity (Policy COS-P12.5); and
I. The project will include an 8 ft. tall tubular steel fence on the perimeter to protect the new well facility (Policy COS-P13.2).

Staff's Analysis

As proposed and conditioned, the project complies with applicable General Plan policies, as outlined under Exhibit A.

3. Compliance with Zoning Ordinance

A. Conditional Use Permit

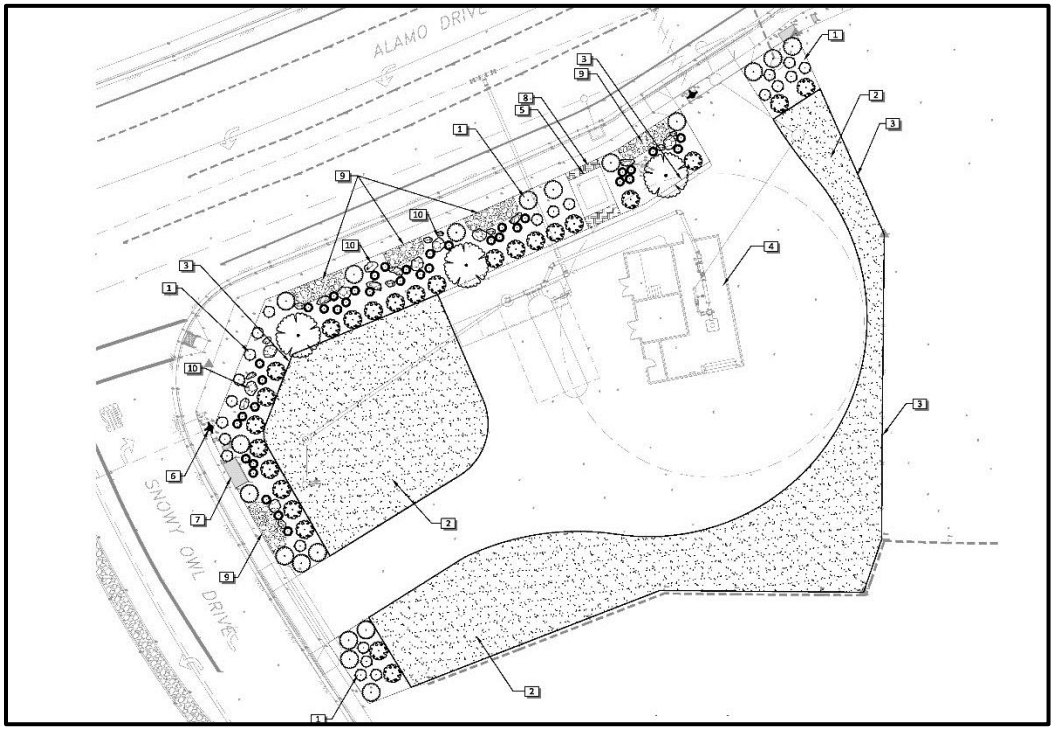
Section 14.09.080.040.A.9 (Residential Medium Density District – Conditional Uses) of the Code, a Conditional Use Permit is required for new public utility and public service buildings and structures on a site less than two acres when located in the RM zoning district. A conditional use is a type of use that has the potential to generate certain impacts, depending on the location, design, and operation of the use. For these reasons, these uses require a higher level of review than permitted uses to ensure that they will be compatible with surrounding land uses. According to Section 14.09.110.020 (Permitting Authority) of the Code, the Planning Commission is authorized to: (1) approve the project; (2) approve the project with modifications; or (3) deny the project. The following provides an analysis of the project.

1. Site Plan – The site plan identifies a 1,400 sq. ft. single-story building, an 8 ft. tall by 27 ft. long cylinder filter, and an 8 ft. tall tubular steel fence around the perimeter of the site. Primary access is provided on Snowy Owl Drive with a second driveway on Alamo Drive.

Figure 3. Site Map

2. Landscaping – The proposed landscape plan provides an assortment of shrubs and trees along the project frontage on Snowy Owl Drive and Alamo Drive. An 8 ft. tall tubular steel fence is proposed at the edge of the landscape setback to provide security to the facility. Interior improvements consist of decomposed granite with asphalt for the driveway and common area around the building.

Figure 4. Landscape Plan



3. Building Design – The proposed building design (Attachment 3) consists of stucco siding, with two exterior colors; tan color for the body and brown for the trim.

4. Filter System – As noted above, the project would include an 8 ft. tall cylinder filter for filtering manganese from groundwater. Figure 5 below shows the typical design for the filter system. As proposed, the filter would be visible from Alamo Drive, Snowy Owl Drive and adjoining residential development to the south. As an effort to screen the unsightly appearance of the mechanical equipment, staff is recommending Condition No. 6, which requires the applicant to plant privet shrubs along Alamo Drive and Snowy Owl Drive to screen from the public right-of-way. In addition, Condition No. 6 requires Italian Cypress trees to be planted along the south perimeter wall to provide screening from adjoining residential properties.

Figure 5. Manganese Filtration System

B. Compliance with Development Standards

The project is subject to compliance with development standards in the City's Zoning Ordinance for setbacks, coverage, building height, landscaping, etc. The project meets the minimum development standards outlined in the Code. Table 1 below shows a comparison between codified standards and the proposed project:

Table 1 – Summary of Development Standards

	Standard	Proposed
Min. Site Area	None	6.0 acres
Coverage	50%	4.5%
Building Setbacks		
Front (Snowy Owl Drive)	15 ft.	100 ft.
Side (Alamo Drive)	20 ft.	30 ft.
Side (Interior)	4 ft.	45 ft.
Rear (Interior)	15 ft.	65 ft.
Landscape Setbacks		
Front (Snowy Owl Drive)	15 ft.	15 ft.
Side (Alamo Drive)	20 ft.	20 ft.
Rear (Interior)	None	18 ft.
Building Height	45 ft.	20 ft.

Source: Public Works Department & City of Vacaville Land Use and Development Code.

Staff's Analysis

Based on staff's analysis, the proposed project meets the criteria and findings required for approving the Conditional Use Permit, as outlined under Exhibit A and conditioned under Exhibit B.

ENVIRONMENTAL REVIEW

Categorical Exemption

Pursuant to Section 15332, Class 32 (In-Fill Development Projects) of the California Environmental Quality Act (CEQA), the project is Categorically Exempt from the requirements of CEQA. Staff has analyzed the project and determined that no additional environmental review is required for this project.

CONCLUSION

Based on staff's analysis identified above, the project meets the applicable General Plan, Land Use and Development Code and CEQA criteria, and should be approved with conditions.

RECOMMENDATION

By simple motion, approve the Conditional Use Permit for Well No. 17, subject to the conditions of approval.

List of Attachments

Draft Resolution 19-199 with
- Exhibit A – Findings of Fact
- Exhibit B – Conditions of Approval
- Exhibit C – Site Plan

1. Location Map
2. Project Description
3. Project Plans

RESOLUTION NO. 18-263

RESOLUTION OF THE PLANNING COMMISSION APPROVING THE CONDITIONAL USE PERMIT FOR WELL NO. 17 AT 201 SNOWY OWL DRIVE, SUBJECT TO THE CONDITIONS OF APPROVAL

WHEREAS, the City of Vacaville Utilities Department submitted an application for an Environmental Assessment and Conditional Use Permit request for the following project:

Well No. 17
201 Snowy Owl Drive
APN: 0137-072-040

WHEREAS, the Vacaville Planning Commission held a public hearing on November 19, 2019, to consider the application. The public hearing before the Planning Commission was duly noticed in accordance with applicable state law and the Vacaville Development Code requirements; and

WHEREAS, the Planning Commission considered the application, testimony and evidence, and the applicable criteria.

NOW, BE IT RESOLVED, that the Planning Commission does hereby:

1. Adopt the findings of fact shown in Exhibit A, which is attached and hereby incorporated herein, and based on these finding does;

2. Adopt a determination that the Well No. 17 project is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with Section 15332, Class 32 (In-Fill Development Projects) of CEQA; and

3. Approve the Conditional Use Permit for the Well No. 17 project, subject to the conditions of approval shown in Exhibit B, which is attached and hereby incorporated herein.

I HEREBY CERTIFY that the foregoing resolution was introduced and passed at a regular meeting of the Planning Commission of the City of Vacaville, held on the 19th day of November, 2019 by the following vote:

AYES:

NOES:

ABSENT:

ATTEST:

_____

Barton Brierley, AICP, Director of Community Development

List of Exhibits

Exhibit A – Findings of Fact
Exhibit B – Conditions of Approval
Exhibit C – Site Plan, Building Elevations and Landscape Plan

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EXHIBIT A TO RESOLUTION 19-199

WELL NO. 17
201 Snowy Owl Drive
(APN 0137-072-040)
Conditional Use Permit
Findings of Fact
File No. 19-199

Code sections referenced below are from Vacaville Land Use and Development Code (LUDC), unless otherwise specified.

SUMMARY OF EVIDENCE

The Planning Commission bases its decision on the following information: (1) the project application, including attachments and related studies; (2) the staff reports, City files, records and other documents prepared for and/or submitted to the City relating to the environmental review and the project itself; (3) the evidence, facts, findings and other determinations set forth in this resolution; (4) the Vacaville General Plan, the Vacaville Land Use and Development Code and other applicable plans, codes and resolutions of the City of Vacaville; (5) all documentary and oral evidence received at public workshops, meetings, and hearings or submitted to the City during the comment period relating to the project or the environmental review; (6) the minutes and recordings of the Planning Commission hearing; and (7) all other matters of common knowledge to the to the City, including, but not limited to, City, state, and federal laws, policies, rules, regulations, reports, records and projections related to development within the City and its surrounding areas.

CONDITIONAL USE PERMIT FINDINGS

LUDC 14.09.110.070 Findings Required for Approval

The decision-maker, when approving a conditional use permit, shall adopt findings of fact:

A. These findings shall include but not be limited to, the following:

1. That the project is consistent with the goals, objectives, and policies of the General Plan and the Development Code;

A. GENERAL PLAN – As proposed and conditioned, the project is consistent with the following goals and policies of the Vacaville General Plan:

- *Goal PUB-10 – The project provides a reliable water supply within the City by constructing a new Well facility;*
- *Goal PUB-11 – Construction of the project will provide a new water supply to meet the City's demands (Goal PUB-11);*
- *Policy PUB-P12.5 – The project will harmonize with adjoining land uses because the project will include landscaping abutting Alamo Drive and the existing single-family homes to the south;*
- *Policy PUB-P5.3 – The proposed building will be compatible with adjoining buildings because the project will include stucco siding with earth tone colors, which is consistent with adjoining residential homes in the Alamo Place*

subdivision. In addition, the project will provide landscape buffers between surrounding uses to shield unsightly equipment;

- *Policy PUB-5.4 – The project will provide adequate landscaping with a 20 ft. landscape setback along Alamo Drive and a 15 ft. setback along Snowy Owl Drive;*
- *Policy LU-P1.5 – The project will complement surrounding neighborhoods because the scale of the building and equipment is comparable to building heights on surrounding residential properties to the north and south;*
- *Policy COS-P6.4 – The Applicant will be required to protect any cultural resources that are accidentally discovered during initial ground disturbing activities;*
- *Policy COS-P12.5 – The Applicant will be required to implement dust control measures during initial grading activity; and*
- *Policy COS-P13.2 – The project will include an 8 ft. tall tubular steel fence on the perimeter to protect the new well facility.*

B. *ZONING ORDINANCE – The project is consistent with the Zoning Ordinance, because: (1) the proposed land use is conditionally permitted by the Residential Medium (RM) zoning district in accordance with Section 14.09.080.040.A.9 (Residential Medium Density District – Conditional Uses) of the Code; (2) the City provided adequate notification about the project in accordance with Section 14.09.072.060 (Public Hearing and Notice) and Section 14.03.023.020 (Public Notice and Review) of the Code; and (3) the applicant has applied for a Conditional Use Permit in accordance with Chapter 14.09.110 (Conditional Use Permits) of the Code.*

C. *DEVELOPMENT CODE – The project is consistent with the Land Use and Development Code, because: (1) the project complies with the development standards for development within the Residential Medium zoning district as noted under Chapter 14.09.074 (Residential Districts Development Standards) of the Code; (2) the project will comply with the City's Performance Standards as noted under Chapter 14.09.127 (Performance Standards); and (3) the project will provide sufficient landscaping along the project frontage and perimeter of the site,*

2. That the subject site is suitable for the type and intensity of use or development proposed, and the location, size, design, and operating characteristics of the proposed use are compatible with adjacent uses or with adjacent natural resources;

   Finding: As proposed and conditioned, the project meets this criterion because: (1) the project complies with the Residential Districts Development Standards; (2) the project complies with the City's Performance Standards; and (3) the project will be compatible with surrounding development by complying with development standards and providing increase setbacks along property boundaries and the public street.

3. That the proposed use and any exception or waiver to development or performance standards shall not result in conditions that would be detrimental to the public health, safety, or welfare of the community;

   Finding: As proposed and conditioned, the project meets this criterion because: (1) the proposed land does not require any exceptions or waivers to development or

performance standards; and (2) the project will provide perimeter fencing around the property to protect City assets, and protect the public from accessing the site.

4. That adequate public facilities and services are available to serve the site or will be made available concurrent with the proposed development;

   Finding: As proposed and conditioned, the project meets this criterion because: (1) existing sewer, storm and water infrastructure is available in Alamo Drive; and (2) other needs including electricity and gas will be provided by PG&E from existing infrastructure along Alamo Drive.

5. That projected traffic levels and levels of service are, or as a result of conditions of approval, will be consistent with the policies of the Transportation Element of the General Plan;

   Finding: As proposed and conditioned, the project meets this criterion because: (1) no changes to roadways are proposed beyond developing the Project in conjunction with the existing access roadway; and (2) the proposed land use is a low intensity use that will not generate excessive levels of traffic at the site.

6. That the potential impacts to the City's inventory of residential lands have been considered;

   Finding: The project will not impact the City's inventory of residential lands because: (1) the project will not displace any existing homes; (2) although the project does not consist of residential development, the Well facility is necessary to support residential land uses in the area; and (3) the project will provide screened and buffers abutting existing residential homes to reduce any unsightly appearances of proposed mechanical equipment.

<u>Conditional Use Permit Conclusion</u>

Based on the facts and findings above, the project meets the Conditional Use Permit criteria with the conditions listed in Exhibit B.

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EXHIBIT B TO RESOLUTION 19-199

WELL NO. 17
201 Snowy Owl Drive
(APN 0137-072-040)
Conditional Use Permit
Conditions of Approval
File No. 19-199

I. Standard Conditions of Approval:

Vacaville Utilities Department (hereinafter referred to as "Applicant") and City of Vacaville (hereinafter referred to as "Property Owner") shall comply with the applicable Standard Conditions of Approval. In the event of a conflict between the Standard Conditions of Approval and these Conditions, these conditions shall prevail.

II. Project-Specific Conditions:

The Applicant and Property Owner shall comply with the following Project-Specific Conditions:

PLANNING

1. This action approves a Conditional Use Permit request to construct a new City Well facility on a vacant 0.7-acre parcel located at 201 Snowy Owl Drive. The new facility includes an approximately 1,400 sq. ft. single-story building, 8 ft. tall by 27 ft. long cylinder filter, with an 8 ft. tall tubular steel fence around the perimeter of the site. Primary access is provided on Snowy Owl Drive and a secondary access is provided on Alamo Drive.

   This approval shall expire on November 19, 2021, unless Building Permits are issued and construction commenced and diligently pursued prior to the expiration date, or an application for a time extension is filed prior to the expiration date.

2. Plans submitted for Building Permits shall be in substantial compliance with plans approved by this action and dated November 19, 2019, except as modified by these conditions of approval. Any modifications to the approved plans, project description or land use, except as modified by these conditions of approval, shall be subject to review and approval by the Director of Community Development ("Director") and may require a separate Planning entitlement review process.

3. The Standard Conditions of Approval and the Project-Specific Conditions set forth herein shall run with the land and shall apply to the Project Applicant and to all future owners of the property. (Cohn v. County Board of Supervisors (1955) 135 Cal. App. 2d 180, 184)

4. Plans submitted for Building Permits shall identify the following minimum setbacks for the building and manganese filter cylinder, measured from the property line to foundations:

   a. Snowy Owl Drive (Front) – 15 feet
   b. Alamo Drive (Side) – 20 feet
   c. Interior (Side) – 4 feet
   d. Existing Homes (Rear) – 15 feet

5. Stucco foam trim shall be provided around all exterior doors and vents, which shall be painted on all sides.

6. Plans submitted for Building Permits shall include a final Landscape Plan consisting of the following, subject to review and approval by the Director:

    a. Evergreen hedge shrubs (Privet or equivalent) shall be planted along Alamo Drive and Snowy Owl Drive to provide screening from the public right-of-way. Shrubs shall be planted 1-2 feet apart, or as recommended by a Landscape Architect.
    b. Evergreen columnar trees (Italian Cypress or equivalent) shall be planted along the southern property line to provide screening for abutting residential homes. Trees shall be planted 8-10 feet apart, or as recommended by a Landscape Architect.
    c. The existing electrical vault on Snowy Owl Drive and the proposed vault on Alamo Drive shall be painted green to blend with landscaping.
    d. All existing trees shall be preserved. All new trees shall be a minimum fifteen (15) gallon size (1½ inch trunk caliper measured from four feet above finished grade).
    e. Trees shall not be planted directly on top of any storm drain or sewer line. In addition, trees planted in these areas shall include linear root barrier panels to protect the utility lines from root encroachment.
    f. All landscape planters shall contain appropriate soil amendments to ensure sustained growth of trees and shrubs.
    g. All landscaping must be continuously maintained in a healthy and attractive condition, free of weeds and debris, in accordance with the approved plans. Dead and dying plant materials shall be replaced with healthy specimens as necessary.

7. Plans submitted for Building Permits shall include a photometric plan demonstrating compliance with Chapter 14.09.127 (Performance Standards) of the Land Use and Development Code related to site and parking lot lighting. On-site lighting shall comply with Section 14.09.127.110 (Lighting and Glare) of the City of Vacaville Land Use and Development Code. Plans shall be revised to comply with the following:

    a. The proposed building lights shall not be permitted on the south elevation abutting the residential properties, these lights shall be low-profile and pointed downward to avoid glare onto adjoining properties.
    b. The future light pole shall be relocated away from the abutting residential properties. Lighting mounted onto the light pole shall point downward and away from the abutting residential properties.
    c. Except for street light poles located in the public right-of-way, all exterior lights shall be motion sensor and shall dim after 5 minutes of inactivity.
    d. Flickering or flashing lights shall not be permitted.

8. Roof-mounted equipment shall not exceed the height of the parapet or equipment well. Plans submitted for building permits shall include: (1) building cross-sections; (2) maximum height of units; (3) maximum height of equipment pads/curbs; (4) low and high parapet heights; and (5) a statement confirming that no roof units will exceed the height of the lowest parapet. A statement by the project's mechanical engineer shall be placed on the plans verifying that the roof units shall not exceed the height of low or high parapets. It shall be the responsibility of the Applicant, and all future property owners, to ensure equipment curbing and final unit sizes do not result in visible roof units/equipment. Please note the final inspection approvals from Planning shall not be granted if the project includes visible roof units/equipment.

9. Section 14.09.072.150 (D) of the City of Vacaville Land Use and Development Code states: “A permit or entitlement may be revoked for reasons which include, but are not limited to, any of the following: (1) Failure to comply with the original approval or with one or more of the project conditions as originally approved; or the construction or development of the subject property is not in conformance with the project as approved; (2) Upon a determination that the permit or entitlement was obtained or extended upon fraud or misrepresentation; and (3) Upon a determination that the project violates a provision of the Municipal Code or is not operating in conformance with the performance standards”.

10. The Applicant and Property Owner shall comply with these conditions of approval and all applicable provisions of the Vacaville Municipal Code (Zoning, Subdivision, Building Codes, etc.), the Vacaville General Plan and any applicable policy plan or specific plan, as such provisions may be amended from time to time including, but not limited to, Vacaville Municipal Code Section 14.09.072.190, which requires, except as otherwise provided by law (e.g. Government Code 66474.9) that the Applicant/Property Owner shall defend, indemnify, and hold harmless the City and its officials and employees in any action, claim or proceeding brought by any third party to overturn, set aside, or void any permit, entitlement, or approval issued or granted by the City. The City shall promptly notify the Applicant of any such action, claim or proceeding and the City shall cooperate with Applicant in the defense thereof without contributing to the cost of such defense.

11. The Applicant and Property Owner shall indemnify, defend and hold the City of Vacaville and its officers and employees harmless against all claims, suits or actions made against them arising out of or in connection with the ownership, occupancy, use or development of the project site, or any portion thereof, including the installation or construction of improvements thereon; however, this duty to indemnify and defend shall not extend to any claim, suit or action arising solely from the City or its officers or employees' negligence or misconduct. In addition, the Applicant shall comply with the requirements of Vacaville Municipal Code Section 14.09.072.190.

FIRE

12. The Well No. 17 project shall comply with the California Fire Code and NFPA Standards.

13. Approved address numbers shall be provided for the building. Such numbers shall contrast with their background and be readily visible from the street. CFC 901.4.4, NFPA 1, 10.13 and Vacaville Fire Dept. Policy.

14. A Knox key box shall be located next to the gate on the new fence. An application is available at the Fire Department Administration Office. The applicant shall submit the application promptly to avoid delays in occupancy.

15. The Applicant shall provide a minimum of one 2A-10: BC fire extinguisher per 1,500 square feet with a maximum of 75 feet travel distance from any location within the building. (Verify locations of extinguishers with the Fire Inspector prior to installation). (CFC 1002.1 and Vacaville Fire Dept. Policy). All signage and labels shall be provided.

16. All work shall be performed in conformance with California Fire Code Chapter 33, “Fire Safety During Construction and Demolition” and NFPA 241 “Safeguarding Construction, Alteration, and Demolition Operations”.

17. In case a fire detection and/or suppression system is out of service for any length of time, a firewatch shall be assigned to monitor the premises. In addition, the contractor shall notify the Fire Department before a system is taken out of service and indicate specifically when the system is to be out of service and when it is to be restored. CFC 901.7, 1404.5, NFPA 101, 9.6.1.7. The Fire Department’s guideline is attached hereto.

18. The top of stored materials shall remain a minimum of 24 inches below the ceiling.

19. A hazard rating diamond shall be posted in a visible area when hazardous materials are stored per NFPA 704.

20. Driveways and fire apparatus access roads shall be at least 20 feet wide and able to hold 80,000 pounds.

21. Fire hydrants shall be located no more than 300 feet (122 m) from a fire hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and water mains shall be provided at a location(s) required by the Fire Code Official. The applicant shall also verify fire hydrant location(s) with the Vacaville Fire Department. The fire hydrant that is being relocated shall have a required hydro and flush inspection per NFPA.

22. An approved on-site water supply capable of supplying the required fire flow for on-site fire protections shall be provided to all premises upon which buildings are constructed. When any portion of the building is in excess of 150 feet from a water supply on a public street, as measured by an approved route around the exterior of the building, on-site fire hydrants and mains capable of supplying the fire required fire flow shall be provided when required by the Fire Marshal.

23. Fire lanes shall be required and have signage where needed, which will be decided during inspections.

24. A Fire inspector shall be present during flushing of all fire lines and testing.

25. Thrust blocks and kickers for fire line shall be inspected by a fire inspector prior to cover-up.

26. Unless otherwise approved by the Fire Marshal, all private driveways shall meet the following criteria:

    a. Average grades shall not be more than 12.5% with no section greater than 14%.
    b. Sections of private driveways less than 100 feet in length may have grades of 15% if specifically approved by the Fire Marshal on a case-by-case basis.
    c. Private driveways greater than 100 feet in length shall have a minimum clear paved width of 20 feet.
    d. Private driveways less than 100 feet in length shall have a minimum width of 15 feet.
    e. Private driveways greater than 100 feet in length shall have a turn-around or turnout approved by the Fire Marshal every 100 feet and at the structure.

27. Plan Checks for Fire Department permits shall require a minimum four weeks.

28. Submit two (2) complete sets of underground private fire hydrant and fire service water main piping plans and specifications to the Fire Department, conforming to NFPA 24, for review and approval prior to installation. Submittal shall include underground piping plan, underground trench detail showing depth of burial and type of backfill, construction installation drawing of PIV and FDC, manufacturer's specifications of piping, valves, joints and fittings, and calculated size and locations of thrust blocks. (1001.3) CFC

29. At no time shall any work regulated by the Fire Code or State Fire Marshall Amendments to CCR Title 24 shall be allowed until adequate plans, specifications, and appropriate plan review fees are submitted and approved by the Fire Department.

30. At no time shall the installation of any fire service main, fire hydrant, indicating control valve or fire department connection be allowed until adequate plans, specifications, and appropriate plan review fees are submitted and approved by the Fire Department.

31. At no time shall the installation of any fire sprinkler pipe be allowed until adequate plans, specifications, and appropriate plan review fees are submitted and approved by the Fire Department.

32. At no time shall the installation of any fire alarm devices or material be allowed until adequate plans, specifications, and appropriate plan review fees are submitted and approved by the Fire Department.

33. The Applicant shall contact the Fire Department at (707) 449-5482 (minimum two working days notice required) for required inspections. Final inspection will need to be scheduled with your Building Inspector.

34. Additional annual permits may be required prior to occupancy.

STANDARD CONDITIONS OF APPROVAL FOR ALL DESIGN PERMITS, USE PERMITS, PLANNED DEVELOPMENTS, AND SUBDIVISION MAPS

CODE & POLICY REQUIREMENTS
MAY ONLY BE SUPERCEDED BY SPECIAL CONDITIONS OF APPROVAL

General Conditions

1. Development shall be in substantial conformance with the approved site plan, floor plans, and elevations prepared by Kennedy Jenks and Utilities Engineering Division and stamped approved on November 19, 2019, and any modifications or changes as may be required to meet these Standard Conditions of Approval and any Special Conditions of Approval. In the event the applicant proposes any deviations from the approved plan of subdivision or the Standard or Special Conditions of Approval, the Director of Community Development or his designee may require the project to be re-submitted to the Planning Commission for consideration at a duly noticed public hearing. The applicant will be responsible for paying a new application fee for any such reconsideration.

2. In the event of a conflict between these Standard Conditions of Approval and any Special Conditions, the Special Conditions of Approval shall prevail. If applicable, any conflict between the Standard and or Special Conditions of approval and the Development Agreement, the Development Agreement shall prevail.

3. Prior to the issuance of any grading and/or building permit, the development shall comply with all applicable provisions of the Vacaville Municipal Code (Land Use and Development Code, Subdivision Codes, Building Codes, etc.), the Vacaville General Plan, any applicable policy or specific plan, and these Conditions of Approval.

4. Failure of the project applicant to comply with all applicable provisions of the Vacaville Municipal Code (Land Use and Development Code, Subdivision Code, Building Codes, etc.), the Vacaville General Plan, any applicable policy or specific plan, and these conditions of approval may result in revocation of the project approval.

5. No development shall commence until the Applicant receives a grading permit and/or a building permit and pays all applicable fees, charges, and assessments, including development impact fees and building permit and inspection fees, in accordance with Chapter 11 of the Vacaville Municipal Code and any applicable School Impact Fees and County Facilities Fees.

Hold Harmless; Indemnification of City

6. In accordance with Section 14.09.072.190 (Duty to Indemnify and Defend City) of the Vacaville Municipal Code, the Applicant, and any parties or individuals acting through the Applicant or granted rights-of-entry by Applicant, shall defend, indemnify, and hold harmless the City of Vacaville (“City”) and its agents, officers, and employees from any claim, action, or proceeding against the City or its agents, officers, and employees seeking to set aside, void, annul, or modify an approval or action of the City or its City Council, Planning Commission, Director of Community Development, Zoning Administrator, or any other department, committee, commission, agency, board, official, or employee of the City relating to a subdivision or other land use application, discretionary

or ministerial permit or approval, or other development; provided, however, that this duty to defend, indemnify, and hold harmless is conditioned upon City's prompt notification of such claim, action, or proceeding and its reasonable cooperation in the defense thereof. As used in the preceding sentence, "cooperation" shall not exclude the expenditure or payment of any funds by City

7. Applicant and any successor in interest to this entitlement shall defend, indemnify and harmless City and its agents, officers and employees from and against any and all claims, losses, costs, damages, injuries or expenses (including, but not limited to, attorney fees, expert witness and consultant fees, and other costs of litigation) arising out of or in any way related to injury or death of persons or damage to property that arise out of or relate to the use and or development of the property pursuant to this (*Design Permit, Use Permit, or Planned Development),* or by any action or activity by City, whether caused by joint negligence of the City, its officers or employees.

Cooperation In The Event Of Legal Challenge

8. In the event of any administrative, legal or equitable action or other proceeding is instituted challenging the validity of this approval, the sufficiency of any environmental review under CEQA ("Third Party Challenge"), or the issuance of any grading or building permits pursuant to this approval, Applicant and City shall mutually cooperate with each other in the defense of such challenge. City may tender the defense of any such Challenge to Applicant ("Tender"), in which case Applicant shall pay for and control all aspects of the defense and shall indemnify, defend, and hold harmless City, its agents, officers, and employees from and against any liabilities, costs, and fees arising out of such Challenge (including, but not limited to, Attorneys fees, expert and consultant fees, and other costs and fees of litigation). If after the Tender City wishes to assist Applicant in the defense of the matter, City may do so if Applicant consents to such assistance and if City pays its own attorney fees and costs (including related court costs). Should Applicant refuse to accept such a Tender, City may defend the Challenge, and if City so defends, Applicant shall promptly reimburse City for all attorney fees, consultant and expert fees, and other costs reasonably incurred by City in the defense thereof.

Consultations and Permits Required by State and Federal Agencies

9. The Applicant shall be responsible for scheduling all required consultations and obtaining all necessary permits from all applicable State and Federal resource agencies prior to commencement of grading activities, unless otherwise approved by the City Engineer and/or Director of Community Development.

10. In the event any regulatory agency requires amendments to the project that result in substantial deviations from the approved project or these Conditions of Approval as determined by the Community Development Director, these Conditions of Approval shall prevail. Should any conditions or requirements of any regulatory agency require amendments to the Project or these Conditions of Approval that may not be approved as a Modification in accordance with applicable provisions of the Land Use and Development Code, the Director of Community Development may require the project to be re-submitted to the Planning Commission for consideration at a duly noticed public hearing. The applicant will be responsible for paying a new application fee for any such reconsideration.

Archaeological Remains or Cultural Artifacts

11. Should archaeological remains or cultural artifacts be encountered during any phase of construction, all construction activity in the general vicinity of the find shall be halted and a qualified archaeologist and the Community Development Director shall be notified immediately. Work on the project shall not be resumed until a mitigation plan with adequate measures for site protection is reviewed and approved by the Community Development Director.

Construction Activities

12. No construction or grading equipment shall be operated nor any outdoor construction or repair work shall be permitted within 500 feet from any occupied residence between dusk (one half-hour after sunset) and 7:00 AM Monday through Saturday, and no such grading or construction activities shall be allowed on Sundays or holidays except as provided for below:

    a. Interior work which would not create noise or disturbance to a reasonable person of normal sensitivity in the surrounding neighborhood shall not be subject to these restrictions;
    b. A request for an exception to the permitted construction hours and days may be granted by the Director for emergency work, to offset project delays due to inclement weather, for 24-hour construction projects, or other similar occurrences.

13. Construction traffic shall not use existing residential streets for access to the site unless approved by the City Engineer.

14. If applicable, prior to the commencement of construction, the Applicant shall obtain air quality permits from the Yolo-Solano Air Quality Management District for the operation of large stationary equipment such as generators

Deferral of On-Site and/or Off-Site Improvements

15. In case of exceptional circumstances, the Community Development Director shall be authorized to defer completion of on-site and/or off-site improvements past the date of occupancy of the proposed building or dwellings provided that the Applicant enters into a Deferred Improvement Agreement with the City of Vacaville and provided that the Applicant post with the City of Vacaville adequate financial securities to ensure completion of such deferred improvements.

Design Permits, Use Permits, Planned Developments; Variances

16. Development shall be in substantial conformance with the approved site plan, floor plans, and elevations prepared by Kennedy Jenks and Utilities Engineering Division and stamped approved on November 19, 2019, and any modifications or changes as may be required to meet these Conditions of Approval. In the event the applicant proposes any deviations from the approved site plan, floor plan, elevations or these Conditions of Approval that may not be approved in accordance with applicable provisions of the Land Use and Development Code, the Director of Community Development may require the project to be re-submitted to the Planning Commission for consideration at a duly noticed

public hearing. The applicant will be responsible for paying a new application fee for any such reconsideration.

17. The project approval is granted for a period of one year from the effective date of approval unless a Special Condition is approved granting a different length of time. Unless a building permit is issued and the improvement of the site is diligently pursued or completed prior to the expiration of one year, the approval shall lapse and become void. A one-year extension may be considered by the original decision-maker, provided that prior to the expiration date an application for renewal of the project is filed with the Community Development Director. Approval shall be for two years if processed concurrently with a Tentative Map.

18. Final (construction) architectural drawings, site plan, landscape plan, and sign drawings shall be submitted for review and approval by the Community Development Director prior to the issuance of any building permits.

Architecture and Design

19. Unless approved as a part of this application, the Director of Community Development shall review and approve the proposed colors and exterior construction materials prior to the issuance of Building Permits.

20. Communications equipment, including microwave equipment, may remain unscreened if visually integrated with the building design through color, location, and construction.

21. All building mounted equipment, including but not limited to louvers, pipes, overhead doors or service doors, access ladders, downspouts, conduit, and electrical/service boxes, shall be painted consistent with the color scheme of the building.

22. Ground mounted equipment such as but not limited to double detector check valves, reduced pressure devices 3 inches and larger, backflow prevention devices, gas meters, irrigation valves, and storage tanks, shall be screened by walls or landscaping to the satisfaction of the Community Development Director.

Building Standards and the Issuance of Building Permits

23. No building permit shall be issued until:

    a. The Chief Building Official reviews the plans and specifications and determines compliance with current State adopted Building Standards and all related Appendix Chapters as amended and restated in Title 14 of the Vacaville Municipal Code.
    b. The Community Development Director determines that the plans and specifications conform to the General Plan; all applicable Specific and Policy Plans; the Vacaville Land Use and Development Code, and these Conditions of Approval.
    c. No grading and or/construction may commence unless and until a grading and/or a building permit has been issued and all applicable fees and charges have been paid, except as noted in the California Building Standards.

24. All design calculations shall meet all criteria for Seismic Design Category D and a Basic Wind Speed of 85 MPH Surface Roughness C unless otherwise directed by the Building Official.

25. The applicant is responsible for submitting all of the plans, specifications and reports as required by the Building Official of the Community Development Department.

26. All design shall conform to the current State adopted Building Standards.

27. A soils report providing design and construction criteria shall be provided for all proposed building foundations for new buildings

28. The State of California requires that prescriptive energy standards be met or energy calculations be submitted to the Building Official for all new construction and when conditioned space volume is increased in an existing facility. The energy design shall meet the current State adopted residential and nonresidential standards of the California Energy Commission.

Grading Plans

29. Applicant shall prepare and submit to the City Engineer a Geotechnical Investigation Report prepared by a Civil Engineer or Geotechnical Engineer, licensed in the State of California, to be used in the preparation of the grading plan. The Geotechnical Investigation Report shall provide recommendations for all grading and remediation work. The Applicant shall comply with the recommendations of the Geotechnical Investigation Report and any additional requirements deemed necessary by the City Engineer and Chief Building Official

30. Reasonable measures shall be provided for and practiced to minimize any nuisance from dust during grading and construction operations, including but not limited to having a water truck on the site and watering as necessary to keep fugitive dust from nearby developed properties.

31. All grading work shall be performed in one continuous operation. In addition to grading information, the grading plan shall indicate all existing trees to be preserved and trees to be removed as a result of the proposed development.

32. Applicant shall install and maintain proper erosion control measures at every stage of construction of the project in all areas of the parcel as required by City Engineer.

33. Prior to any grading activity, a grading permit shall be issued and all applicable fees paid.

Storm Drain Improvements

34. No blockage of existing drainage shall be allowed.

35. The site shall be graded such that storm water from the project is discharged from the site into an approved public drainage facility. No increase in runoff will be allowed from this project onto an adjacent property unless adequate private easements have been established. Design of on-site drainage is subject to review and approval by the City Engineer and/or Building Official.

Lot Drainage

36. Applicant shall provide adequate drainage for each lot and construct storm drainage swales, pipes, thru curb drains and inlet connection points to the street drainage system so each lot drainage and storm drain system can tie into the public storm drain system without surface flow over the public sidewalk or proposed private lots. Only natural existing drainage will be allowed to cross property lines, and all new lot improvements shall be tied to a drainage system to properly dispose of the lot drainage within the lot boundary unless drainage easements are obtained. Existing drainage across property lines will be allowed provided that all man made improvements on the uphill lot that causes additional or concentrated drainage to flow to an acceptable drainage system before it reaches the down-hill lot. If this occurs, the uphill property must collect the drainage and dispose into a storm drain system or other method as approved by the City Engineer.

Non-Stormwater Discharges

37. Discharges other than stormwater (non-stormwater discharges) to the storm drain system are prohibited unless approved by the Public Works Director. Non-stormwater discharges include, but are not necessarily limited to, discharges from the washing of motorized vehicles, airplanes, trailers, and recreational vehicles.

Utility Plans

38. Applicant shall prepare a Utility Plan of the site showing the location and preliminary layout of all utilities that will serve the site (water, fire, sewer, storm drain, electrical, gas, telephone, Internet etc.) Applicant shall show all connections points to the City utilities and show new utilities services to be constructed in accordance with City requirements.

39. Public Utility companies are prohibited from locating any above-ground facilities within any linear park, landscaped setback areas, or any designated park or open space to be dedicated to the public unless specifically approved by the City Engineer prior to the approval of the Improvement Plans or grading plans.

40. If the installation of the utilities is to be phased over time, the final improvement plans shall clearly delineate the timing and location of the installation of all utilities from initial to final installation.

Utility Relocation

41. Any relocation of existing improvements or public utilities shall be accomplished under the direction of that utility at no expense to the City or Utility Company prior to occupancy.

Floor Drains

42. Unless otherwise approved by the Director of Public Works and Building Official, sanitary sewer floor drains are allowed in the restrooms and Janitor Room mop sinks only. All floor drains that terminate to sanitary shall be located and installed so as to not accept surface water drainage. The building elevator floor drains shall not discharge oils or other fluids into the sanitary sewer or storm drain lines. Blind sumps are acceptable provided they meet City requirements.

Pavement Design

43. Applicant shall submit a Geotechnical Report prepared by a Soils Engineer registered in the State of California defining the pavement design of the proposed City street pavement section for review and approval by the City Engineer prior to the issuance of a building permit. The pavement design section shall be reflected in the improvement plans of the parking lot.

44. All new pavement areas shall be graded to match existing pavement creating a smooth drivable surface in accordance with City parking lot development standards and criteria.

45. Concrete curbs shall be installed at the edges of all landscape planter areas.

46. Applicant shall install pavement in all parking areas, loading areas, driveways, and all other areas shown on the approved site plan to the satisfaction of the City Engineer prior to the issuance of a Certificate of Occupancy.

Public and Private Landscaping

47. All landscaping shall comply with the City's Water Efficient Landscaping Regulations.

48. After the installation of the landscaping / irrigation, the landscape architect and the landscape contractor shall provide written confirmation to the City Planner that the completed landscaping is installed per the approved landscape plan.

49. All landscaping and irrigation shall be permanently maintained and replaced as necessary per Section 14.09.139.040 (Additional Standards Applicable to All Zoning Districts – Ongoing Maintenance of Landscaped Areas) of the Vacaville Municipal Code.

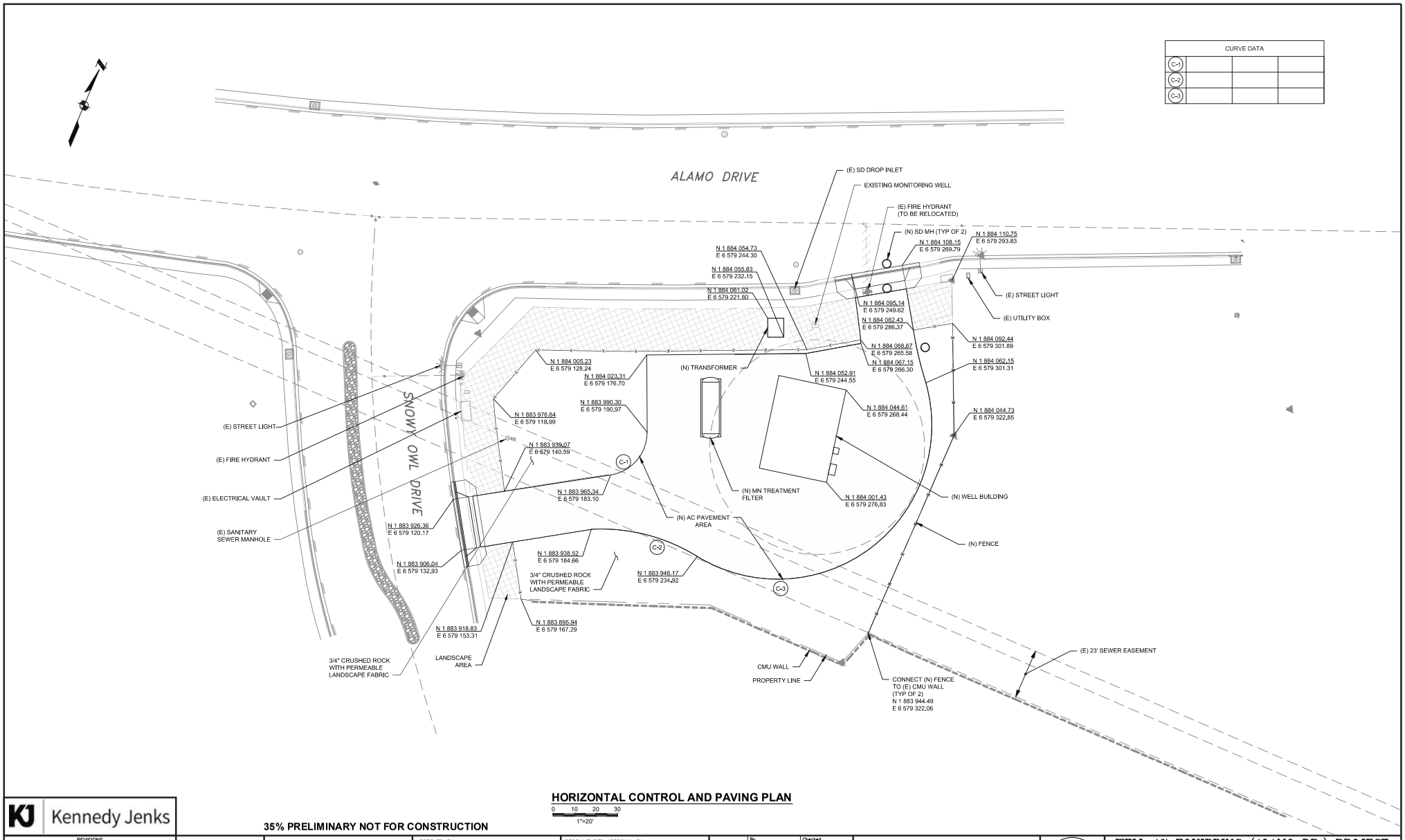
50. Deep root barriers shall be provided for all trees within eight (8) feet of pavement. Trees shall not be planted within ten (10) feet of sewer or water lines.

51. Any required ground mounted equipment, including all backflow prevention devices, timers, manifolds, shall be either placed below grade in appropriate boxes or vaults or screened by landscape or building materials per City design standards.

52. Tree and shrub placement shall take into account the location of approved signage, to promote enhanced views of signage without impacting parking lot and perimeter landscaping coverage.

53. Soil amendments shall be added as recommended by the soils reports and rototill to six (6) inches in depth. Submit copy of soils report and recommended amendment receipts to City Landscape Inspector.

EXHIBIT C TO RESOLUTION NO. 19-199



HORIZONTAL CONTROL AND PAVING PLAN

0 10 20 30

1"=20'

Kennedy Jenks

35% PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

CITY OF VACAVILLE
UTILITIES DEPARTMENT
650 MERCHANT STREET
VACAVILLE, CA 95688

APPROVED BY:

ROYCE W. CUNNINGHAM R.C.E. 41985
DIRECTOR OF UTILITIES

RECOMMENDED APPROVAL BY:

STEPHEN L. SAWYER R.C.E. 30851
ASSISTANT DIRECTOR OF UTILITIES

DRAWN	By	RLH	Checked	JEK
DESIGN	By	JEK	Checked	TLW
QUANTITIES	By		Checked	
SCALE: AS NOTED				

CITY OF VACAVILLE
UTILITIES DEPARTMENT

0 1 2 3 4
ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS

WELL 17 EQUIPPING (ALAMO DR.) PROJECT

CIVIL
HORIZONTAL CONTROL AND PAVING PLAN C-1

PLANS DATE: AUGUST 2019

DISREGARD PRINTS BEARING EARLIER PLOT DATES →	DATE PLOTTED	SHEET	OF
	10/03/19	X	

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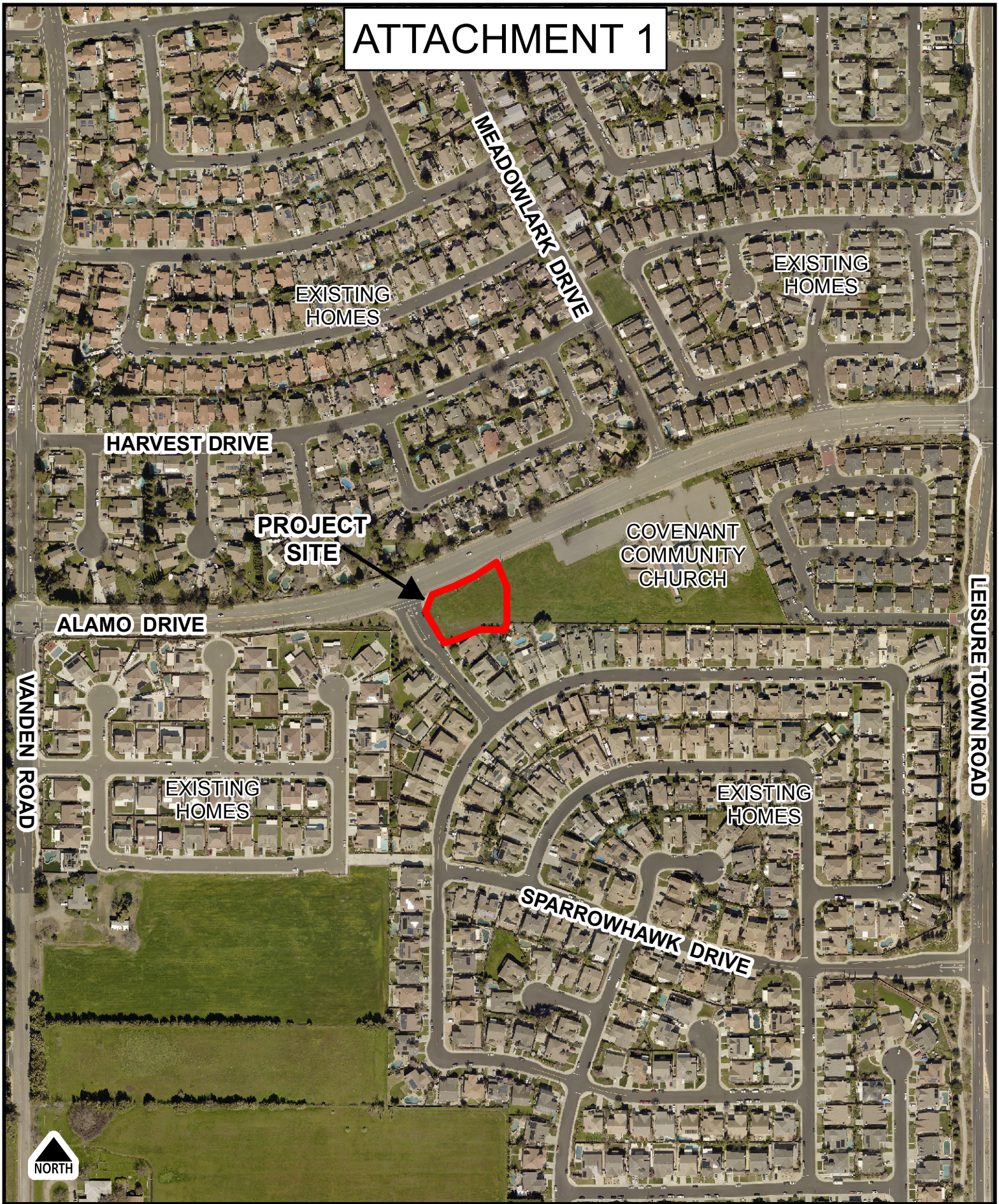
ATTACHMENT 1



CITY OF VACAVILLE
COMMUNITY DEVELOPMENT DEPARTMENT

WELL NO. 17

201 SNOWY OWL DRIVE
(APN 0137-072-040)

FILE NO. 19-199

PROJECT SITE

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ATTACHMENT 2

WELL 17 (ALAMO DRIVE)
PROJECT DESCRIPTION

PURPOSE

The purpose of this project is to construct a new well (Well 17) which will provide additional drinking water production capacity to meet estimated water demands at buildout. The City's Water System Master Plan estimates that an additional 13.5 million gallons per day (MGD) will be needed to meet buildout demands. The Master Plan calls for three to four new wells to be constructed to help meet the future production requirements. One of the City's existing wells has been taken out of service since the document was finalized, so the need for additional wells has become even more critical. It is anticipated that the well proposed for this project will add approximately 2 MGD of production.

PROJECT LOCATION

The proposed location for Well 17 is 201 Snowy Owl Drive at the intersection of Alamo Drive. It will be located on APN 137-072-040, which is a 0.7-acre parcel was dedicated to the City when the Alamo Place subdivision was developed, for the purpose of constructing a new well. An exploratory well was drilled on the site in 2017. The water quality data from the exploratory well supported the Alamo Drive site as a viable option. Based on the analysis of the exploratory well, a monitoring well was constructed to evaluate the three distinct aquifer levels. Water quality analyses from the monitoring well also support this location as a viable option for a new production well.

A well on Alamo Drive will benefit the City's water system because it will have less potential to affect other wells in the system. The City currently has several wells on Elmira Road which need to be operated with careful planning because the drawdown in the water table caused by each well can affect the operation of other wells. With the pending Chromium-6 (Cr6) regulations in California, focus has shifted from production to water quality. This site potentially offers both. The City currently has four wells that could potentially violate MCLs for Cr6 if 10ppb is reinstated, and Cr6 levels were non-detect at this site.

WATER QUALITY

The City's groundwater supply is generally of high quality and meets drinking water standards. Initial water quality tests on samples obtained from the monitoring well at the project site showed that the groundwater at the site meets water quality standards. The City's well construction guidelines, such as deep sanitary seals, minimize impacts on groundwater quality. Water quality at the site will be analyzed again after the production well is drilled to make sure the well meets all Title 22 drinking water standards before it is connected to the distribution system.

GROUNDWATER SUPPLY

The City's Urban Water Management Plan (UWMP), finalized in July 2016, states that groundwater supplies are projected to meet or exceed projected water demands even during

extended drought conditions. The UWMP included a Groundwater Supply Sufficiency Technical Memorandum which describes the sufficiency of groundwater pumped for the past 5 years and planned utilization of groundwater resources through 2040. At the time the technical memorandum was written, the City anticipated adding three new wells by 2020. An analytical groundwater flow model was used to assess water level impacts, and the results indicate that there is sufficient water for the proposed increased demand. Two of the City's wells have been taken out of service since then, resulting in 3.75 MGD of lost production capacity. Well 17 will be the first well added to the system since the report was written, so there should be adequate groundwater supply to accommodate the project.

PROJECT DESCRIPTION

The Well 17 project will be executed in two phases. The first phase will be the drilling phase, in which the new well will be drilled. The second phase of the project will be the equipping phase, when the building and mechanical equipment will be installed. Dividing a production well project into two phases is typical for the City since the two phases require different sets of expertise in both design and construction. Information from the completion of drilling will be used to finalize the design for the equipping phase. The plans and specifications are complete for the drilling phase of the project, and the equipping phase is currently in predesign.

Drilling Phase

During the drilling phase, a rotary drill rig will be used to drill a bore hole to 560 feet below the ground surface. The hole will have a 48-inch diameter at the top and the diameter will be reduced twice as the hole gets deeper. A cement sanitary seal will be installed to 50 feet deep, which is much deeper than the minimum requirement mandated by DDW. The deep sanitary seal is typical for the City's wells and it offers additional protection against possible contaminants that could enter the water system. Stainless steel well casing and screen components will be installed in the column. The drill rig will also use an attachment to swab and airlift loose materials from the well.

After the well has been drilled, a video camera survey will be used to provide a visual inspection of the well casing assembly. A vertical turbine test pump will be installed for well development testing. Approximately 100 feet of piping will be installed to discharge test water to the sewer system. Development pumping will take a minimum of 24 hours, and will continue until the pumped water complies with the turbidity and sand content requirements, the well efficiency requirement has been met, and no movement of the gravel envelope has occurred during the last eight hours of development pumping.

All drilling fluid additives used will comply with industry standards and practices for use in the construction of a municipal water supply well. At no time during construction of the production well shall the Contractor use lubricants, adhesives, or any other heavy metal-, solvent- or organic-based substances that could introduce trace amounts of heavy metals or organic chemicals into the production well in concentrations that would be detectable in water quality samples collected from the production well.

The well will be disinfected with a sodium hypochlorite solution after all work is complete. A locking steel well cover will then be secured to the well head. The well cover will prevent tampering with the well, prevent water or foreign materials from entering the well, and ensure that the well is not a hazard.

The drilling phase of the Well 17 project is anticipated to take 65 working days to complete.

Equipping Phase

The building, mechanical equipment, site improvements, and landscaping will be constructed in the equipping phase. The site will be accessed from Alamo Drive and Snowy Owl Drive. The plan is to access the site from Alamo Drive and exit off of Snowy Owl Drive or Alamo Drive. The site access road and parking area will be designed to allow a 75-ton Crane to navigate the site for maintenance purposes. The security fence will be 7 feet tall, 3-rail tube steel fence. There will be an automatic slide gate or swing gate, and a Knox-Box will be installed for Fire Department access. Most of the area inside the fence will be paved for access and maintenance requirements.

The pump and treatment building layout will be similar to Wells 14 and 16. The building exterior will be similar to that of Well 9. It will have CMU walls with a flat roof and parapet. The ceiling height will be 16 feet. The building will include access doors and rollup door.

Water treatment systems at the site will include on-site sodium hypochlorite generation and fluoride injection. Manganese concentration is approximately 27 to 38 µg/L, which does not exceed the California Division of Drinking Water (DDW) secondary MCL for manganese of 50 µg/L (0.05 mg/L). However, there is still a concern about manganese precipitating on the pipe walls and eventually dispersing through the water system and ending up at consumer taps during water demand spikes. Typically, if manganese concentrations are below 10 to 15 µg/L the manganese does not have the potential to create water quality complaints by water customers. To bring the manganese level under the low-risk concentration a treatment system will likely be incorporated into the equipping of Well 17. Most systems would include filter vessels which are approximately 10 feet tall. Results from well development during the drilling phase will determine whether or not manganese treatment is a necessity.

Landscaping will be designed to screen the site on the Alamo Drive and Snow Owl Drive frontages, blend in with existing landscaping, and use drought tolerant landscaping. Planting will be focused within the street frontages along Alamo Drive and Snowy Owl Drive between the back of walk and the site boundary fencing. The landscape will consist of trees, shrubs, vines, groundcover, boulders, decomposed granite, and mulch. It will feature low-maintenance, hardy plant material.

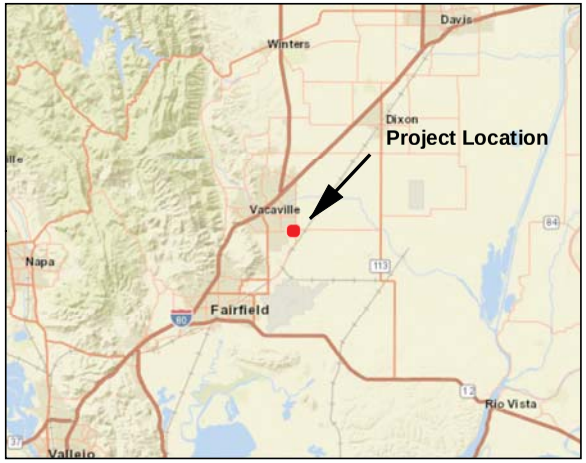
Planting arranged within groups and rows helping to define access points onto the site, keep vehicular and pedestrian site lines clear and reinforce or screen views from the roadway. Vine planting may be used along the site fence as landscape screening may be necessary for any associated vertical well facilities to be determined which may include horizontal pressure filters.

A low-maintenance irrigation system will be implemented, comprised of low-volume subsurface drip irrigation using bubble head type.

ATTACHMENT 3

WELL CONSTRUCTION AND TESTING
CONTRACT PLANS FOR
CITY OF VACAVILLE
WELL 17 (ALAMO DRIVE)
NOVEMBER 2018

VICINITY MAP



SITE LOCATION

SHEET INDEX

W-1 TITLE SHEET AND VICINITY MAP
W-2 WELL LOCATION AND SITE MAP
W-3 WELL DESIGN PROFILE
W-4 STANDARD CONSTRUCTION DETAILS - CASING
W-5 STANDARD CONSTRUCTION DETAILS - TESTING

Project No. **8281009** Drawing **W-1** SHT **1** OF **5**	IMPROVEMENT PLANS FOR **CITY OF VACAVILLE** **WELL 17 (ALAMO DRIVE) DRILLING** TITLE SHEET AND VICINITY MAP SOLANO COUNTY CALIFORNIA	**PROJECT:** DRILLING AND CONSTRUCTION OF MUNICIPAL WELL **PROJECT ADDRESS:** 201 SNOWY OWL DR., VACAVILLE, CALIFORNIA **OWNER:** CITY OF VACAVILLE **ENGINEER:** WOOD RODGERS, INC.	WOOD RODGERS DEVELOPING INNOVATIVE DESIGN SOLUTIONS 3301 C Street, Bldg. 100-B Tel: 916.341.7760 Sacramento, CA 95816 Fax: 916.341.7767	Sources: Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA,

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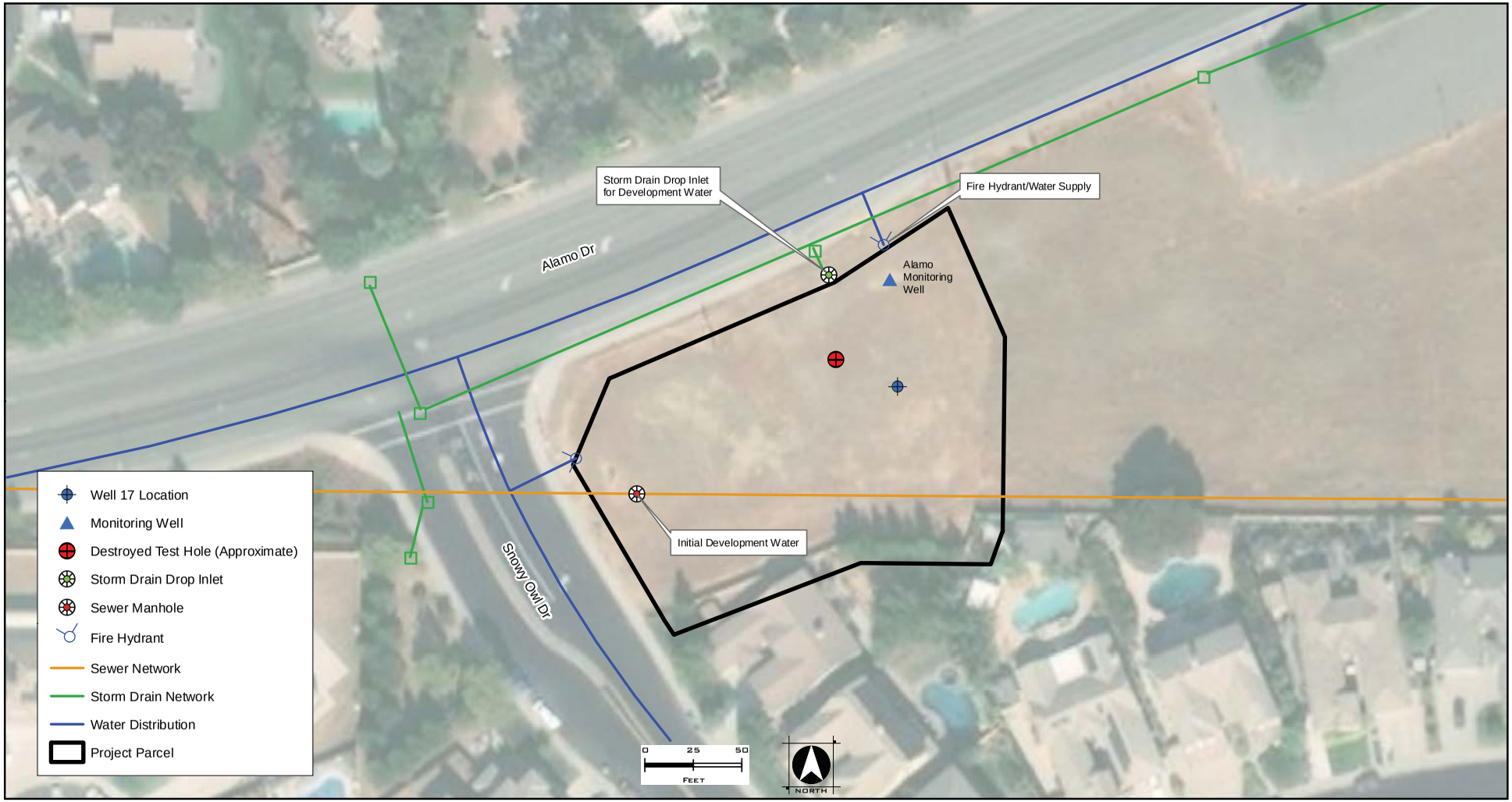

Project No. **8281009**	**CITY OF VACAVILLE** **WELL 17 (ALAMO DRIVE) DRILLING**	**WELL LOCATION:**	WOOD RODGERS DEVELOPING INNOVATIVE DESIGN SOLUTIONS 3301 C Street, Bldg. 100-B Tel: 916.341.7760 Sacramento, CA 95816 Fax: 916.341.7767	Sources: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Drawing **W-2**	WELL SITE MAP	**ALAMO PRODUCTION WELL:** T: 6N R: 01W S: 26		
SHT **2** OF **5**	SOLANO COUNTY CALIFORNIA	**APN: 137-072-040**		

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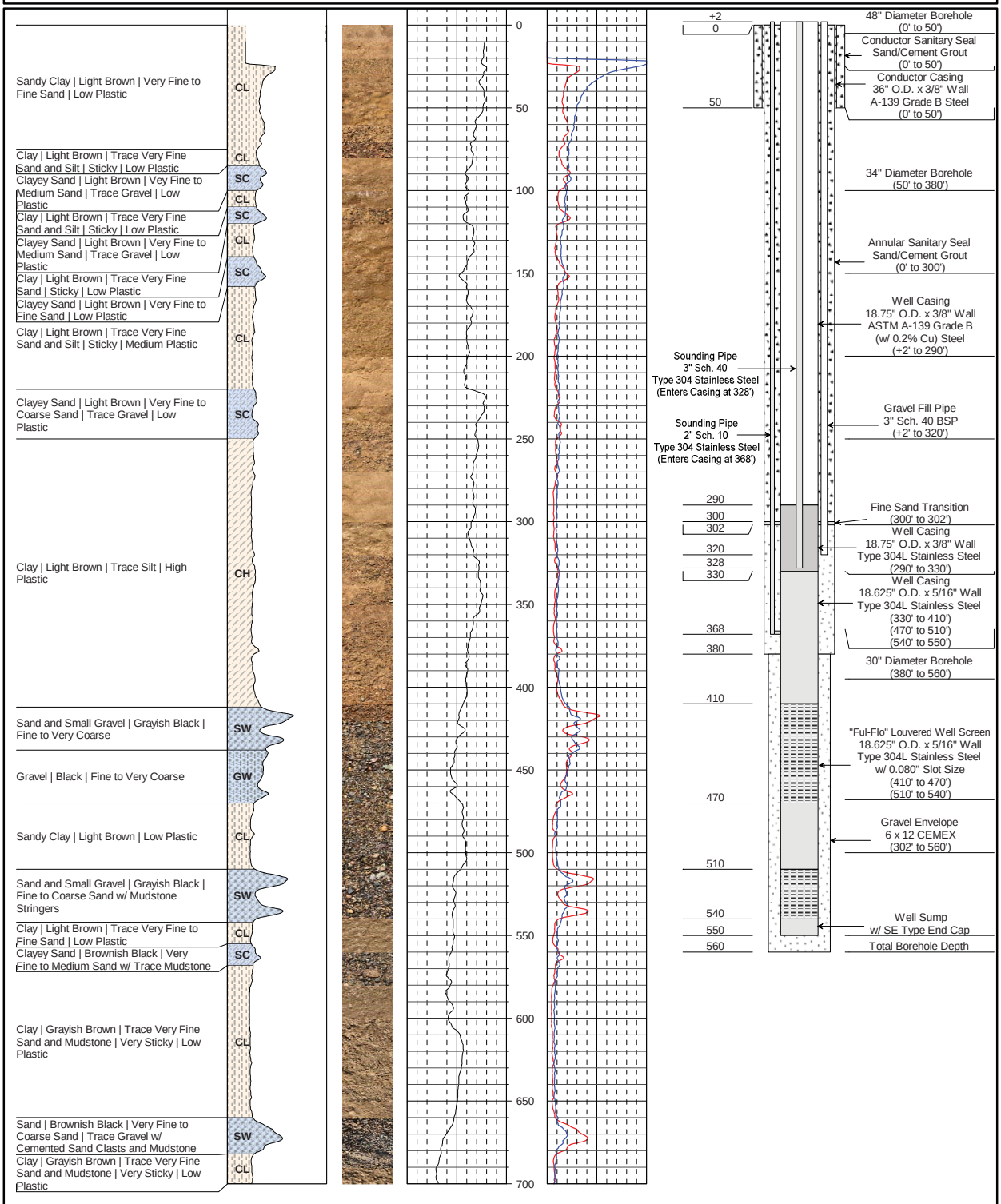
CITY OF VACAVILLE
PRODUCTION WELL DESIGN

TESTHOLE DATA



PROJECT NO. 8281.009	PRODUCTION WELL DESIGN FOR CITY OF VACAVILLE WELL 17 (ALAMO DRIVE) DRILLING	WOOD RODGERS DEVELOPING INNOVATIVE DESIGN SOLUTIONS 3301 C Street, Bldg. 100-B Sacramento, CA 95816 Tel: 916.341.7760 Fax: 916.341.7767	DATE: 10/30/18 10:08
Drawing W-3			SCALE: V: 1" = 60'
Sheet 3 of 5	VACAVILLE, CALIFORNIA		DRAWN BY: J.BRANDON
			DESIGNED BY: L.ERNST
			CHECKED BY: S.SPAETH

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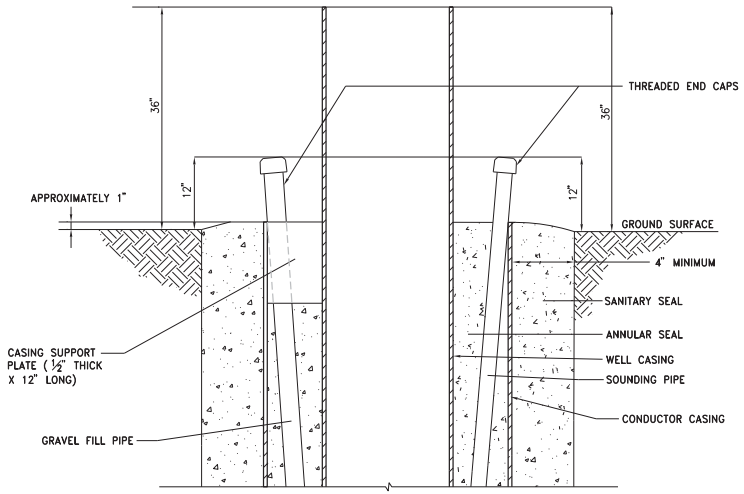
NO.	DESCRIPTION	ENGR. INIT	BY APPROVED	DATE
1	Well Design	SJS		9/21/2017
2	Revised Well Design	JHB		8/1/2018
3	Revised Well Design	JHB		10/26/2018

WELL CASING AND PIPES AT GROUND SURFACE



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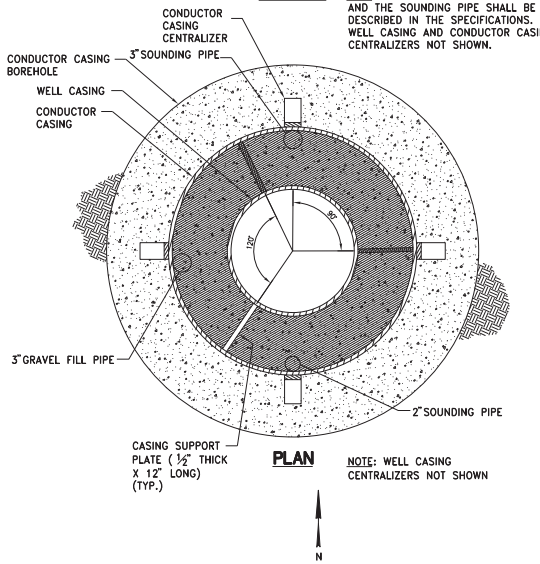
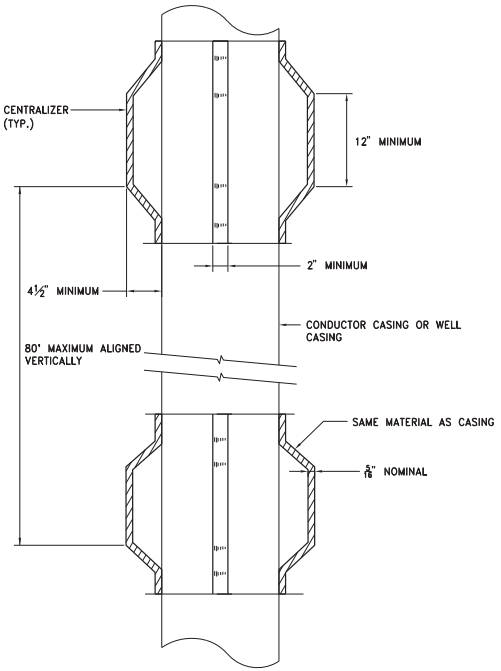


PLAN

NOTE: ORIENTATION OF THE GRAVEL PIPE AND THE SOUNDING PIPE SHALL BE AS DESCRIBED IN THE SPECIFICATIONS. WELL CASING AND CONDUCTOR CASING CENTRALIZERS NOT SHOWN.

NOTE: WELL CASING CENTRALIZERS NOT SHOWN

CENTRALIZERS



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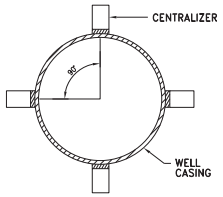
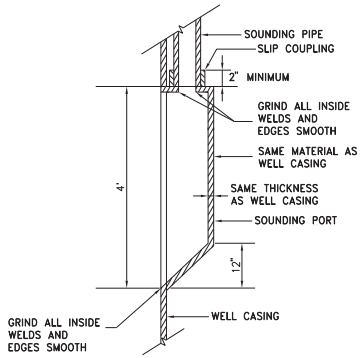


PLAN

SOUNDING PORT



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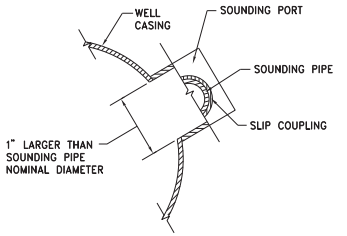


PLAN VIEW (SECTION)

DIGALERT
DIAL TOLL FREE
1-800-642-2444
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

NO.	DESCRIPTION	ENGR INIT	BY	DATE COUNTY APPROVED

DATE: AUGUST 2018
SCALE: H:N/A V:N/A
DRAWN BY: MD
DESIGNED BY: L. ERNST
CHECKED BY: L. ERNST

WOOD RODGERS
INNOVATIVE DESIGN SOLUTIONS
DEVELOPING
3301 C St, Bldg. 100-B
Sacramento, CA 95816
Tel 916.341.7760
Fax 916.341.7767

IMPROVEMENT PLANS FOR
CITY OF VACAVILLE - WELL 17 (ALAMO DRIVE) DRILLING
STANDARD CONSTRUCTION DETAILS - CASING
SOLANO COUNTY CALIFORNIA

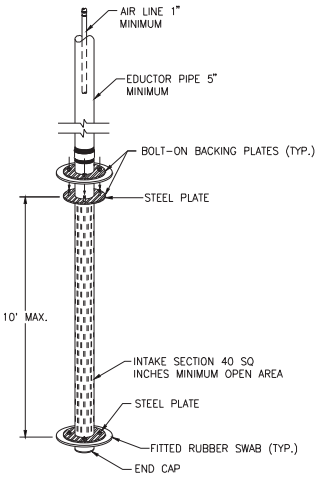
PROJECT NO. 8281.009

DRAWING W-4

SHT 4 OF 5

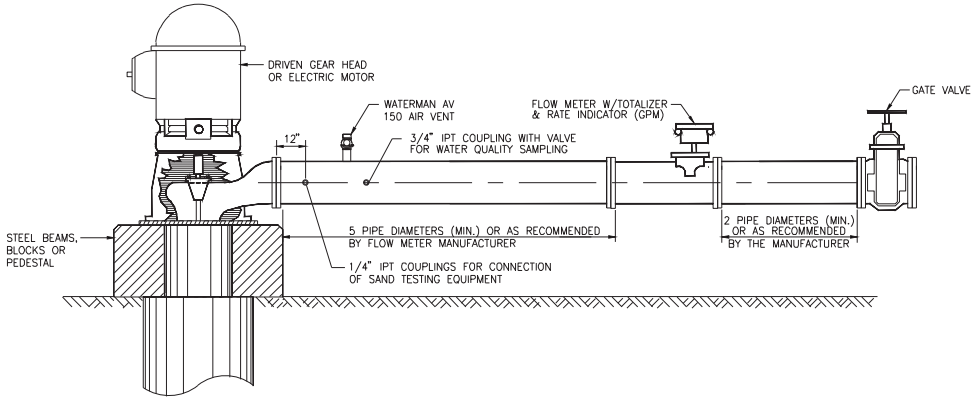
J:\Jobs\8281_Vacaville\8281.009_Alamo_Well_Site\Docs\Specifications\PlanSets\Draft\W4_DETAILS.dwg 10/30/2018 9:44 AM Angelica Mercado

DEVELOPMENT EQUIPMENT AND TESTING TOOL DETAILS



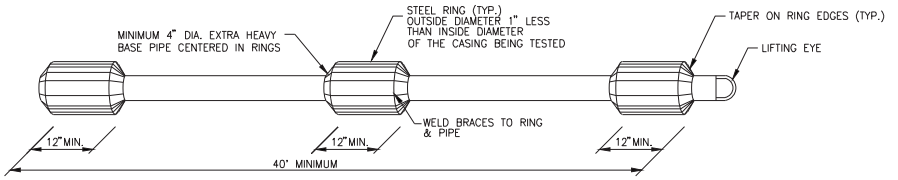
DOUBLE SWAB TOOL

NTS



TEST PUMPING DISCHARGE PLUMBING

NTS



ALIGNMENT TESTING TOOL (DUMMY)

NTS

DIGALERT
DIAL TOLL FREE
1-800-642-2444
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

NO.	DESCRIPTION	ENGR INIT.	BY	DATE	COUNTY APPROVED

DATE: AUGUST 2018
SCALE: H:N/A V:N/A
DRAWN BY: MD
DESIGNED BY: L. ERNST
CHECKED BY: L. ERNST

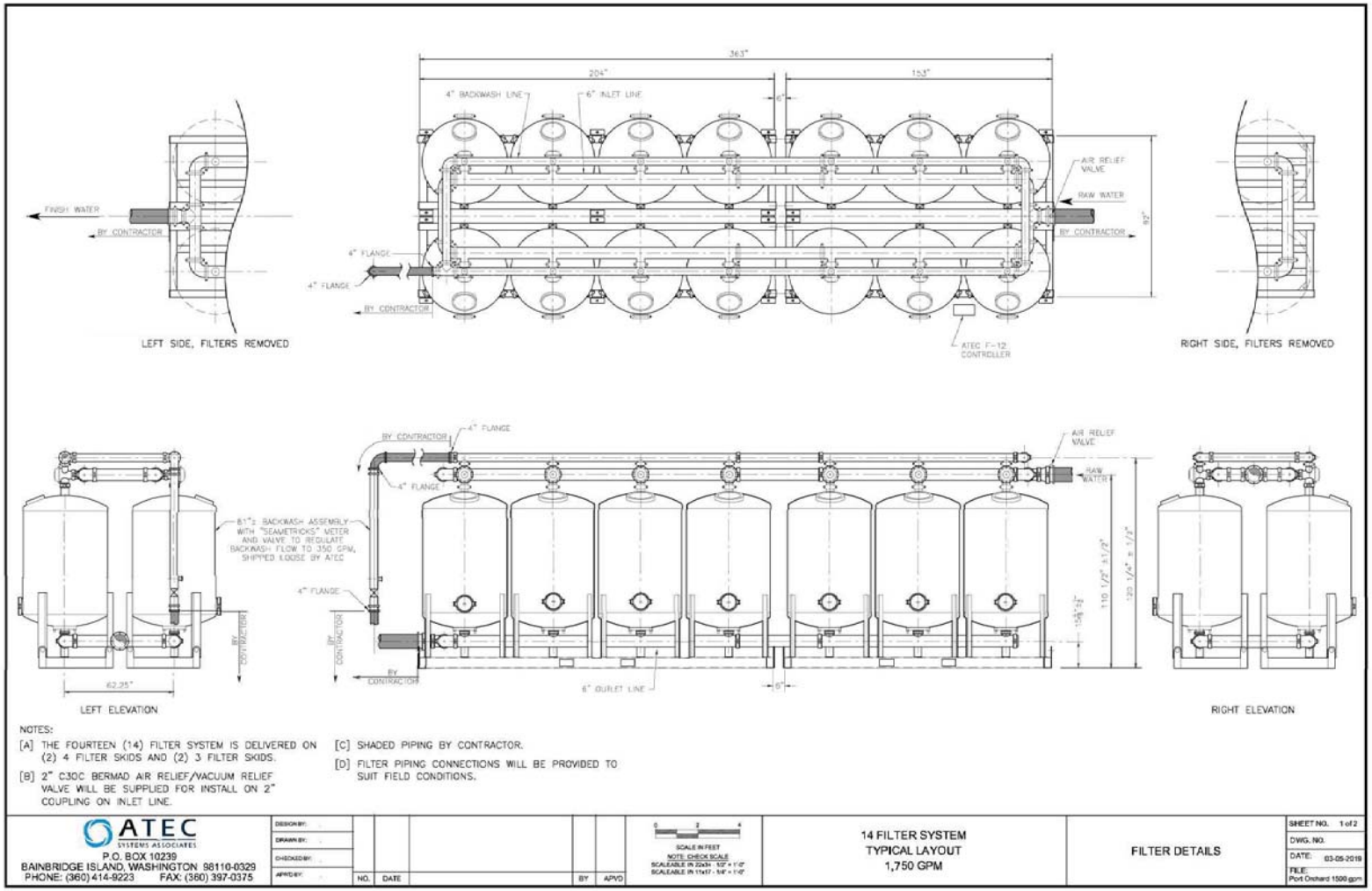
WOOD RODGERS
DEVELOPING INNOVATIVE DESIGN SOLUTIONS
3301 C St. Bldg. 100-B Tel 916.341.7760
Sacramento, CA 95816 Fax 916.341.7767

CITY OF VACAVILLE - WELL 17 (ALAMO DRIVE) DRILLING
IMPROVEMENT PLANS FOR
STANDARD CONSTRUCTION DETAILS - TESTING
SOLANO COUNTY CALIFORNIA

PROJECT NO. 8281.009
DRAWING W-5
SHT 5 OF 5

J:\Jobs\8281_Vacaville\8281.009_Alamo_Well_Site\Docs\Specifications\PlanSets\Draft\WS_DETAILS.dwg 10/30/2018 8:48 AM Angelica Mercado

C:\bms\pwe-useast-005\richard.hills\dms82419\1970001.00-FIG-6.dwg 6/13/2019 10:34 AM RICHARD HILLS



NOTES:

[A] THE FOURTEEN (14) FILTER SYSTEM IS DELIVERED ON (2) 4 FILTER SKIDS AND (2) 3 FILTER SKIDS.

[B] 2" C30C BERMAD AIR RELIEF/VACUUM RELIEF VALVE WILL BE SUPPLIED FOR INSTALL ON 2" COUPLING ON INLET LINE.

[C] SHADED PIPING BY CONTRACTOR.

[D] FILTER PIPING CONNECTIONS WILL BE PROVIDED TO SUIT FIELD CONDITIONS.

ATEC SYSTEMS ASSOCIATES
P.O. BOX 10239
BAINBRIDGE ISLAND, WASHINGTON 98110-0329
PHONE: (360) 414-9223 FAX: (360) 397-0375

DESIGN BY:
DRAWN BY:
CHECKED BY:
APPD BY:

NO.	DATE		BY	APVD

SCALE IN FEET
NOTE: CHECK SCALE
SCALEABLE IN 22x34 - 1/2" = 1'-0"
SCALEABLE IN 11x17 - 1/4" = 1'-0"

14 FILTER SYSTEM
TYPICAL LAYOUT
1,750 GPM

FILTER DETAILS

SHEET NO. 1 of 2
DWG. NO.
DATE: 03-05-2019
FILE: Port Orchard 1500 gpm

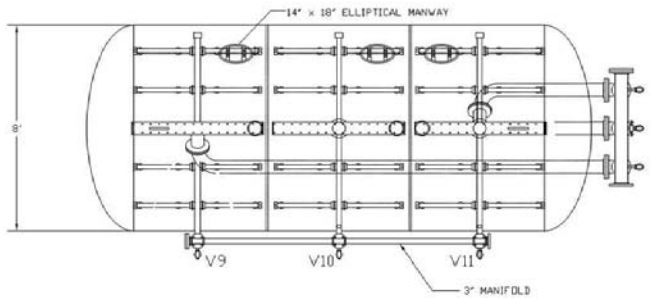
Kennedy/Jenks Consultants

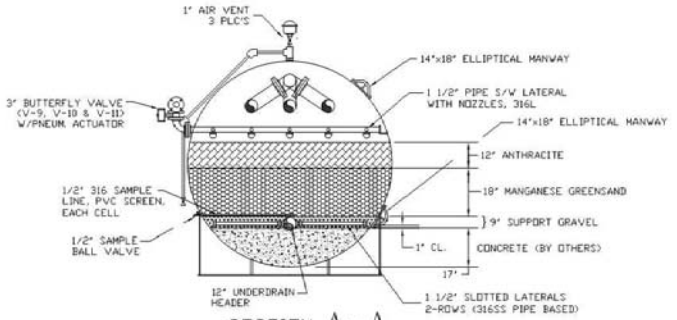
CITY OF VACAVILLE
WELL NO. 17 EQUIPPING PROJECT
VACAVILLE, CA. 95687

WELL NO. 17
TREATMENT LAYOUT
FOR PYROLUSITE 2

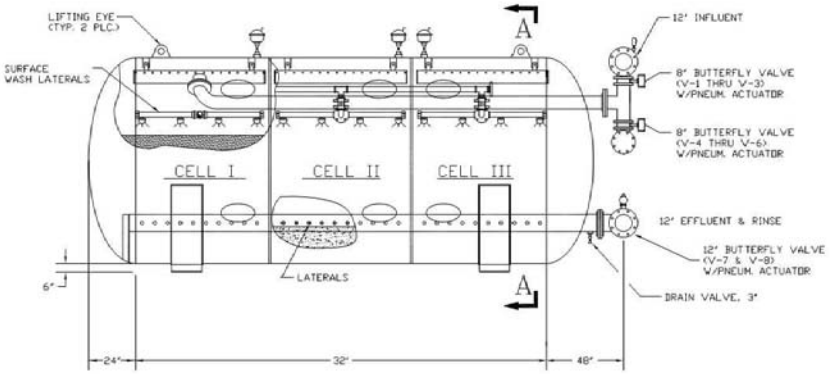
1970001.00
JUNE 2019
FIGURE - 5

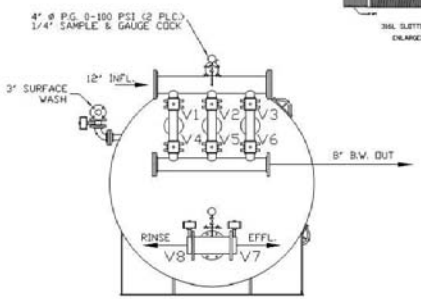
C:\bms\pwe-useast-005\richard.hills\dms824191\1970001.00-FIG-7.dwg RICHARD HILLS 6/13/2019 10:58 AM





SECTION A–A





NOTES:

1.) TANK TO BE DESIGNED AND STAMPED PER ASME CODE SEC. VIII DIV. 1, FOR 100 PSI W.P. (130 PSI TEST).
2.) CELL DIVIDER WALL TO BE DESIGNED FOR 15 PSID.
3.) TANK SUPPORTS SHALL BE DESIGNED TO MEET LOCAL SEISMIC REQUIREMENTS.
4.) VESSEL COATINGS:
INTERNAL SURFACES SHALL BE SANDBLASTED PER SSPC-SP10 AND PAINTED WITH 3 COATS (4-5 MILS PER COAT) OF TNEMEC SERIES 140 POTA-POX (12-15 MILS TOTAL DFT). WHITE FINISH COAT.
EXTERIOR SURFACES SHALL BE SANDBLASTED PER SSPC-SP6 AND PAINTED WITH ONE COAT (2-4 MILS) TNEMEC SERIES 140 POTA-POX, TOP COAT POLYURETHANE.

FILTER SYSTEM CRITERIA

FILTER AREA	264 SQ FT
SERVICE FLOW RATE	2000 GPM (7.6 GPM/SQ. FT.)
SURFACE WASH FLOW RATE	176 GPM (2 GPM/SQ. FT.)
BACKWASH FLOW RATE	1320 GPM (15 GPM/SQ. FT.)
RINSE FLOW RATE	2000 GPM
Δ P @ BACKWASH	8 ~ 10 PSID

VALVE SEQUENCING

O = OPEN, X = CLOSE

MODE	CELL	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11
SERVICE	I	O	O	O	X	X	X	O	X	X	X	X
	II	O	O	O	X	X	X	O	X	X	X	X
	III	O	O	O	X	X	X	O	X	X	X	X
SURFACE WASH	I	X	O	O	O	X	X	X	X	O	X	X
	II	O	X	O	X	O	X	X	X	X	X	O
	III	O	O	X	X	X	O	X	X	X	X	O
BACK WASH	I	X	O	O	O	X	X	X	X	X	X	X
	II	O	X	O	X	O	X	X	X	X	X	X
	III	O	O	X	X	X	O	X	X	O	X	X
RINSE	I	O	O	O	X	X	X	X	O	X	X	X
	II	O	O	O	X	X	X	X	O	X	X	X
	III	O	O	O	X	X	X	X	O	X	X	X

BY	DATE
DR: 15-2000ASSY	3/1/13
CHK:	
PLOT: 1=2 (L)	

NOTICE
ALL INFORMATION, DATA, DESIGNS, AND DRAWINGS CONTAINED HEREIN ARE THE PROPERTY OF LOPREST WATER TREATMENT COMPANY AND MAY NOT BE REPRODUCED OR COPIED, NOR APPROPRIATED TO USES IN ANY WAY DETRIMENTAL TO THE INTERESTS OF LOPREST WATER TREATMENT COMPANY, INCLUDING DISCLOSURE TO OUTSIDE PARTIES, DIRECTLY OR INDIRECTLY, WITHOUT SPECIFIC WRITTEN CONSENT OF LOPREST WATER TREATMENT COMPANY. THIS DOCUMENT IS TRANSMITTED SOLELY FOR THE PURPOSE OF AIDING THE TRANSACTION OF BUSINESS BETWEEN LOPREST WATER TREATMENT COMPANY AND THE RECIPIENT, AND MUST BE RETURNED ON REQUEST.

Loprest Water Treatment Company
Engineers – Manufacturers
Since 1928
3855 Franklin Canyon Rd., Rodeo, CA 94572

HORIZONTAL 3 CELL FILTER ASSEMBLY
FE, MN & AS REMOVAL
2000 GPM

JOB NO.:	DRAWING NO.:	REV.:
16-2000	PROPOSAL	

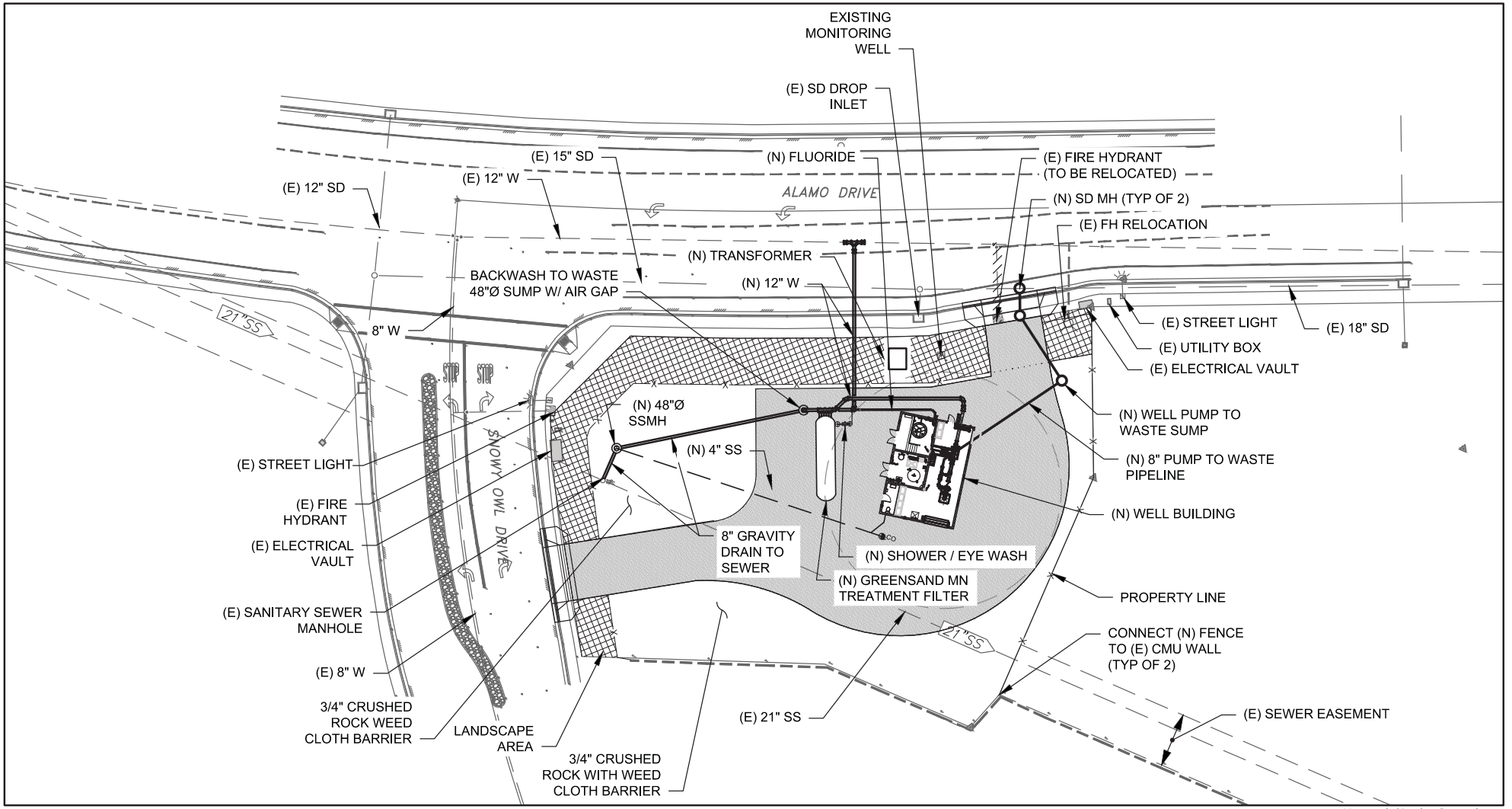
SCALE: NONE | ACAD: 16-2000 ASSY | SHEET:

Kennedy/Jenks Consultants

CITY OF VACAVILLE
WELL NO. 17 EQUIPPING PROJECT
VACAVILLE, CA. 95687

WELL NO. 17
TREATMENT LAYOUT
FOR GREENSAND PLUS

1970001.00
JUNE 2019
FIGURE - 6



0 20 40 60

1"=40'

Kennedy/Jenks Consultants

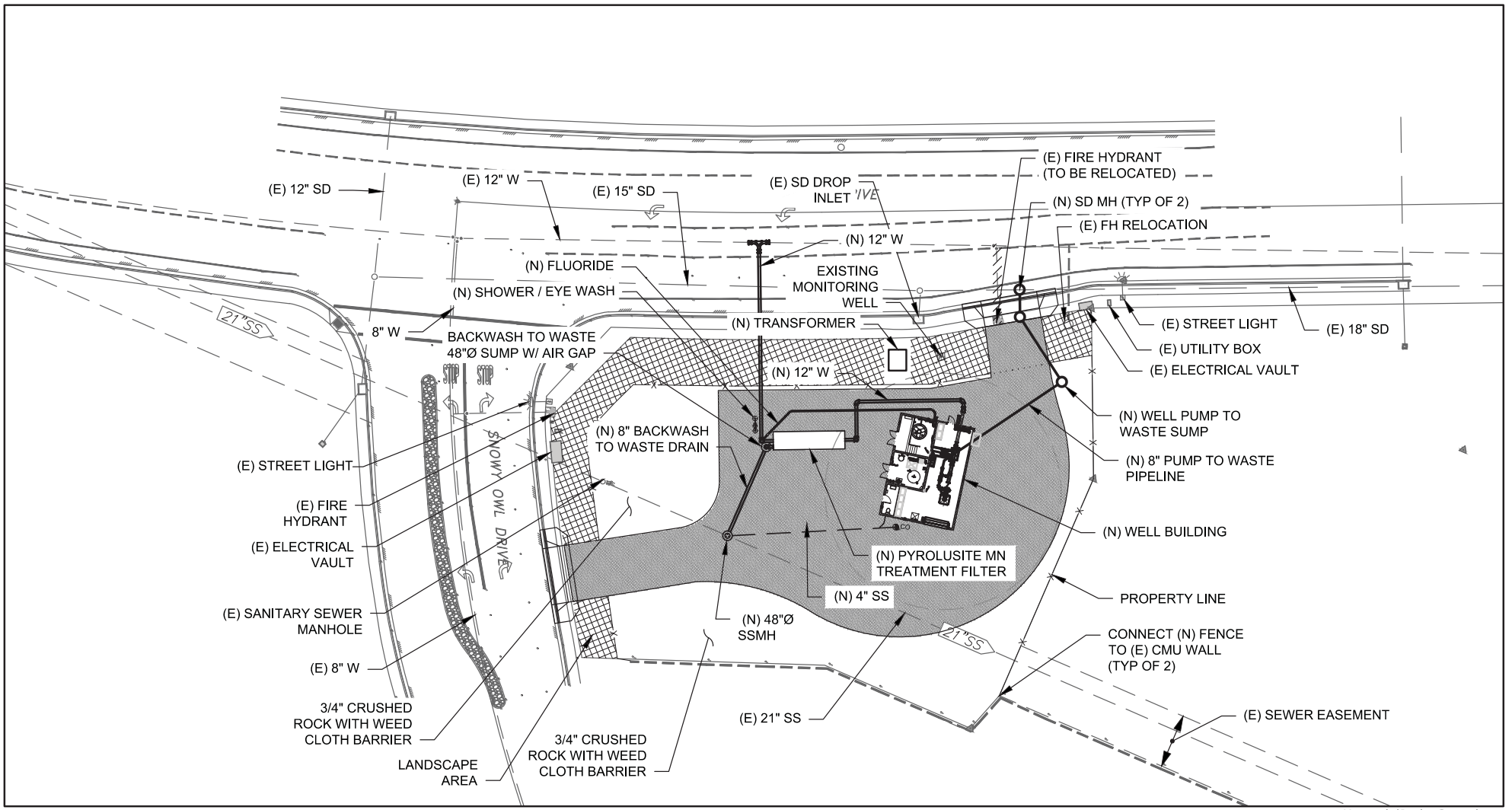
CITY OF VACAVILLE
WELL NO. 17 EQUIPPING PROJECT
VACAVILLE, CA. 95687

WELL NO. 17 SITE MAP #1
GREENSAND MN TREATMENT

JUNE 2019
1970001.00

FIGURE - 7

C:\bms\pwe-useast-005\richard.hills\dms8241\1970001.00-FIG-07.dwg RICHARD HILLS 6/14/2019 9:05 AM



0 20 40 60
1"=40'

Kennedy/Jenks Consultants

CITY OF VACAVILLE
WELL NO. 17 EQUIPPING PROJECT
VACAVILLE, CA. 95687

WELL NO. 17 SITE MAP #2
PRYOLUSITE MN TREATMENT

JUNE 2019
1970001.00

FIGURE - 8

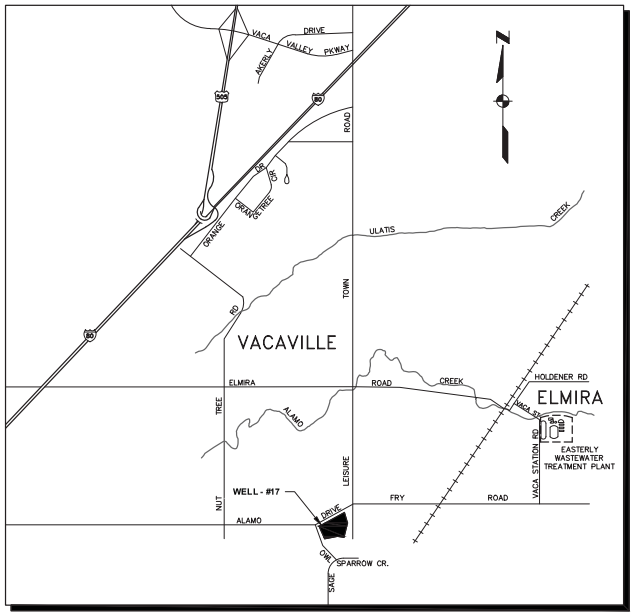
C:\bms\pwe-useast-005\richard.hills\dms82419\1970001.00-14-FILTER.dwg RICHARD HILLS 6/14/2019 9:03 AM

CITY OF VACAVILLE
DEPARTMENT OF PUBLIC WORKS

● VACAVILLE ● ● SOLANO COUNTY ● ● CALIFORNIA ●

PLANS FOR

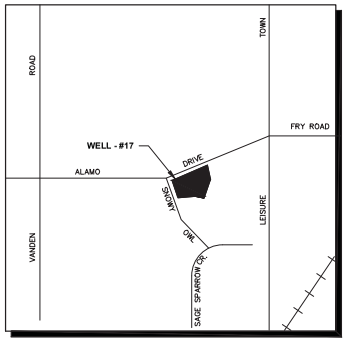
WELL 17 EQUIPPING (ALAMO DR.) PROJECT



VICINITY MAP
SCALE: NTS

35% SUBMITTAL

AUGUST 2019



LOCATION MAP
SCALE: NTS

PREPARED BY

KENNEDY / JENKS CONSULTANTS
10850 GOLD CENTER DRIVE, SUITE 350
RANCHO CORDOVA, CA 95670

Kennedy Jenks
10850 GOLD CENTER DRIVE, SUITE 350
RANCHO CORDOVA, CA 95670

REVISIONS

NO.	DATE	DESCRIPTION	BY

35% PRELIMINARY NOT FOR CONSTRUCTION

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

CITY OF VACAVILLE
UTILITIES DEPARTMENT
650 MERCHANT STREET
VACAVILLE, CA 95688

APPROVED BY:

ROYCE W. CUNNINGHAM R.C.E. 41985
DIRECTOR OF UTILITIES

RECOMMENDED APPROVAL BY:

STEPHEN L. SAWYER R.C.E. 30851
ASSISTANT DIRECTOR OF UTILITIES

DRAWN	By	RLH	Checked	JK
DESIGN	By	JK	Checked	JK
QUANTITIES	By		Checked	

SCALE: AS NOTED

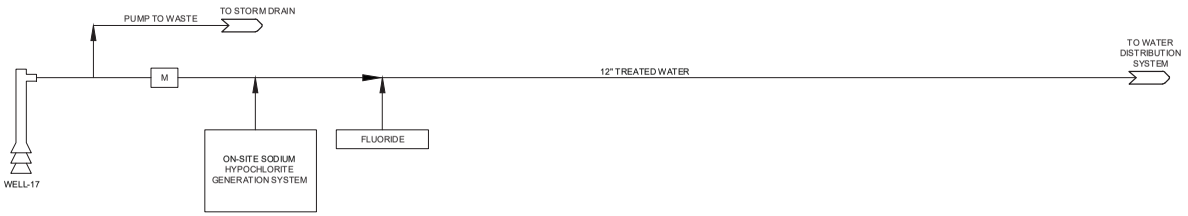
CITY OF VACAVILLE
UTILITIES DEPARTMENT

0 1 2 3 4
ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS

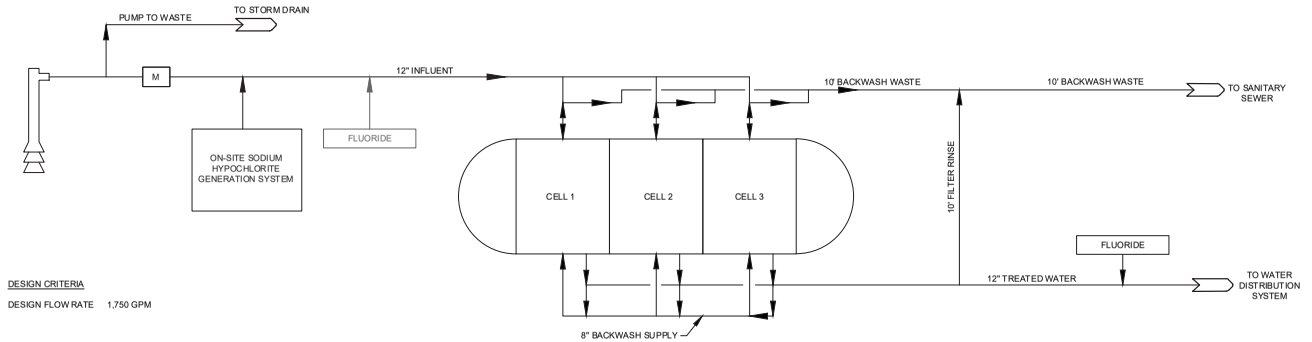
WELL 17 EQUIPPING (ALAMO DR.) PROJECT
GENERAL
VICINITY MAP AND LOCATION MAP G-1

PLANS DATE:

DISREGARD PRINTS BEARING EARLIER PLOT DATES →	DATE PLOTTED	SHEET	OF
	08/16/19	1	



WELL 17 WITHOUT MANGANESE TREATMENT



DESIGN CRITERIA

DESIGN FLOW RATE 1,750 GPM

NOTES:

1. THIS DRAWING IS A SCHEMATIC TO BE USED FOR INFORMATIONAL PURPOSES ONLY. REFER TO P&IDs FOR ALL PIPING, VALVES, AND FACILITIES.

WELL 17 WITH MANGANESE TREATMENT

Kennedy Jenks
10850 GOLD CENTER DRIVE, SUITE 350
RANCHO CORDOVA, CA 95670

REVISIONS

NO.	DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL ENGINEER — TIMOTHY L. WILLIAMS — No. 39104 Exp. 06/30/21 — CIVIL — STATE OF CALIFORNIA

35% PRELIMINARY NOT FOR CONSTRUCTION

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

CITY OF VACAVILLE
UTILITIES DEPARTMENT
650 MERCHANT STREET
VACAVILLE, CA 95688

APPROVED BY:

ROYCE W. CUNNINGHAM R.C.E. 41985
DIRECTOR OF UTILITIES

RECOMMENDED APPROVAL BY:

STEPHEN L. SAWYER R.C.E. 30851
ASSISTANT DIRECTOR OF UTILITIES

DRAWN	By	RLH	Checked	JEK
DESIGN	By	JEK	Checked	JEK
QUANTITIES	By		Checked	

SCALE: AS NOTED

CITY OF VACAVILLE
UTILITIES DEPARTMENT

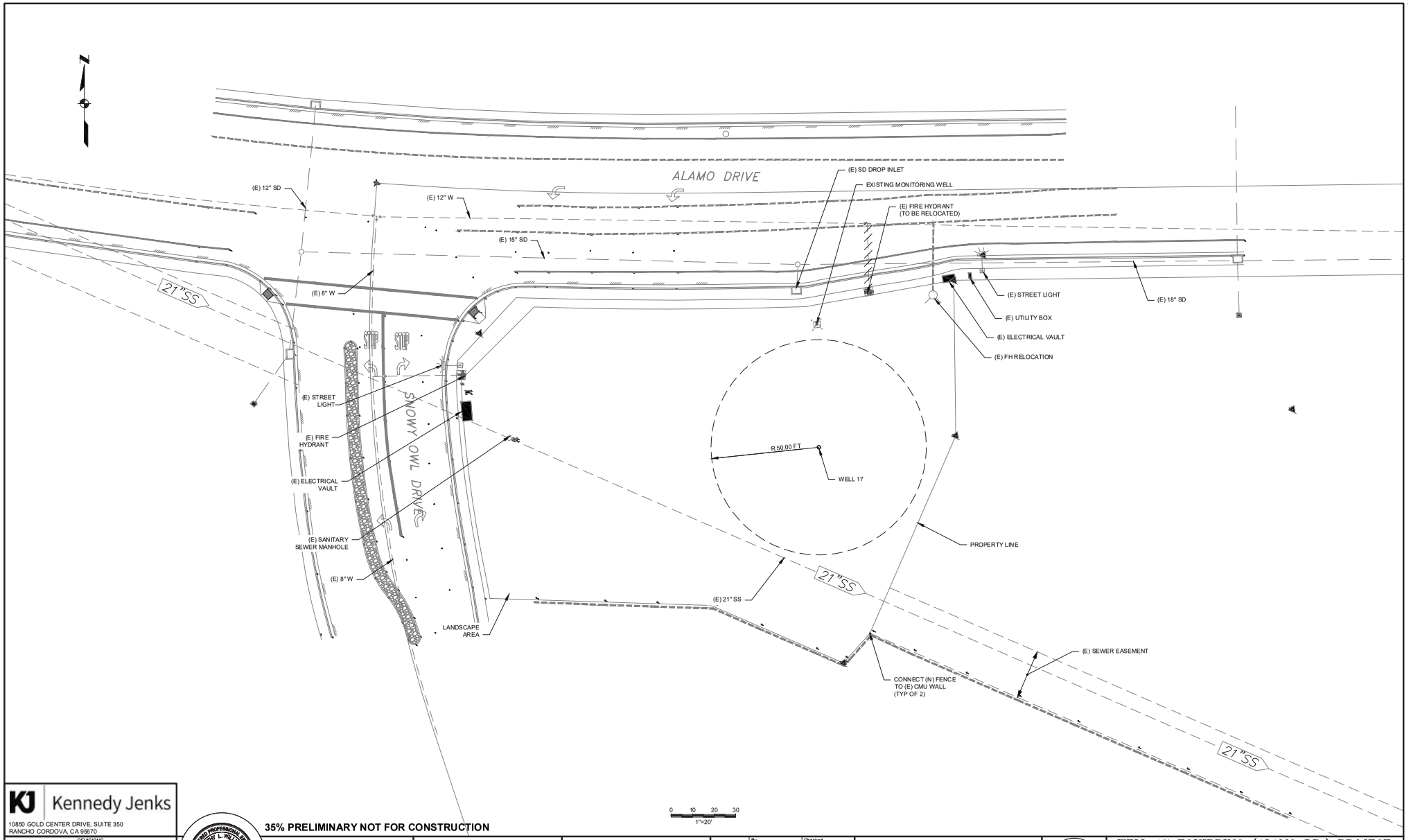
0 1 2 3 4
ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS

WELL 17 EQUIPPING (ALAMO DR.) PROJECT

GENERAL
PROCESS FLOW DIAGRAM G-2

PLANS DATE:

DISREGARD PRINTS BEARING EARLIER PLOT DATES →	DATE PLOTTED	SHEET	OF
	08/19/19	2	



Kennedy Jenks
10850 GOLD CENTER DRIVE, SUITE 350
RANCHO CORDOVA, CA 95670

35% PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL ENGINEER — TIMOTHY L. WELLSFRY — No. 39104 Exp. 06/30/21 — CIVIL — STATE OF CALIFORNIA

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

CITY OF VACAVILLE
UTILITIES DEPARTMENT
650 MERCHANT STREET
VACAVILLE, CA 95688

APPROVED BY:

ROYCE W. CUNNINGHAM R.C.E. 41985
DIRECTOR OF UTILITIES

RECOMMENDED APPROVAL BY:

STEPHEN L. SAWYER R.C.E. 30851
ASSISTANT DIRECTOR OF UTILITIES

DRAWN	By	RLH	Checked	JEK
DESIGN	By	JEK	Checked	JEK
QUANTITIES	By		Checked	
SCALE: AS NOTED				

CITY OF VACAVILLE
UTILITIES DEPARTMENT

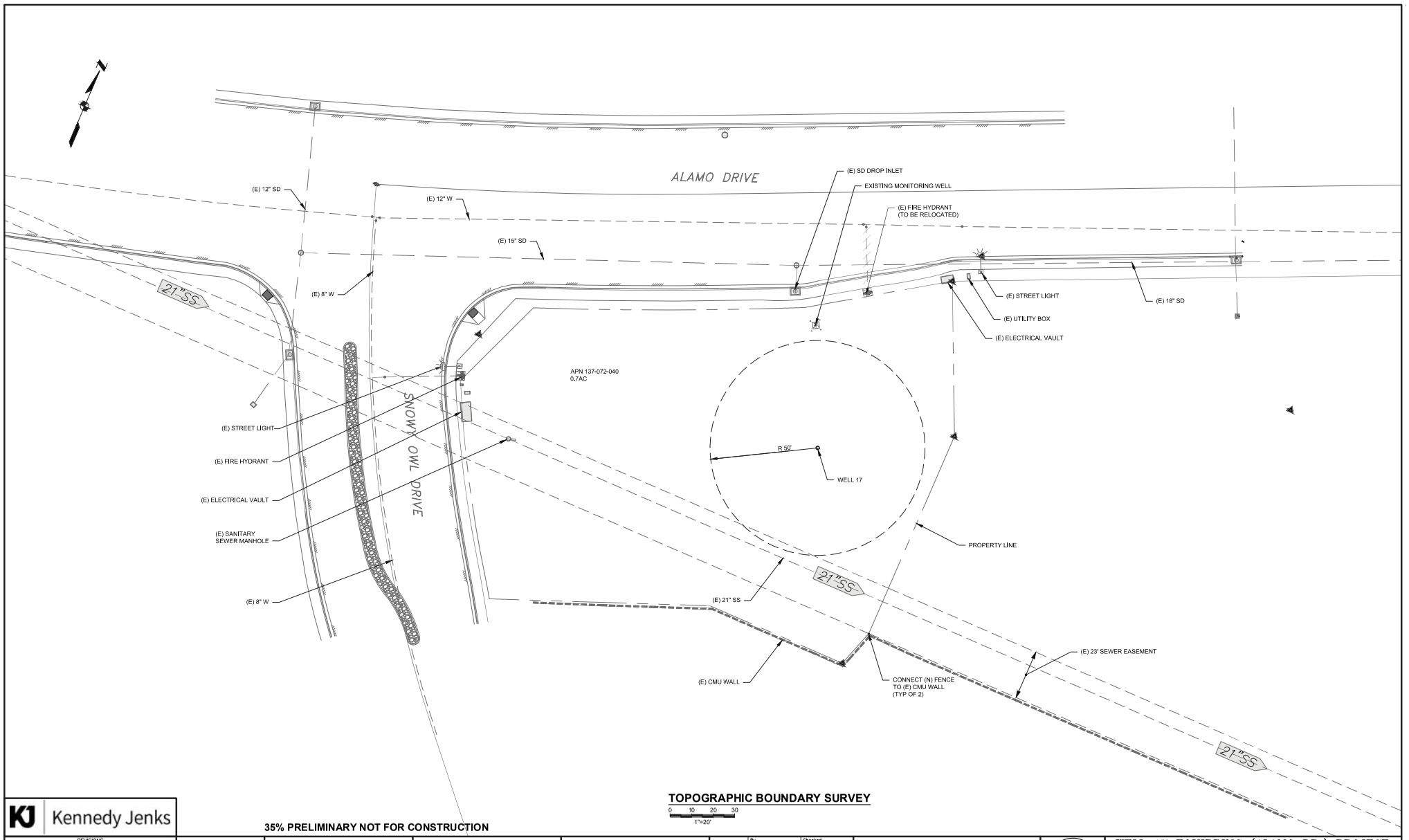
0 1 2 3 4
ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS

WELL 17 EQUIPPING (ALAMO DR.) PROJECT

GENERAL
TOPOGRAPHIC BOUNDARY SURVEY G-3

PLANS DATE:

DISREGARD PRINTS BEARING EARLIER PLOT DATES →	DATE PLOTTED	SHEET	OF
	08/16/19	3	



TOPOGRAPHIC BOUNDARY SURVEY

0 10 20 30
1"=20'

35% PRELIMINARY NOT FOR CONSTRUCTION

Kennedy Jenks

REVISIONS			
NO.	DATE	DESCRIPTION	BY

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

CITY OF VACAVILLE
UTILITIES DEPARTMENT
650 MERCHANT STREET
VACAVILLE, CA 95688

APPROVED BY:

ROYCE W. CUNNINGHAM R.C.E. 41985
DIRECTOR OF UTILITIES

RECOMMENDED APPROVAL BY:

STEPHEN L. SAWYER R.C.E. 30851
ASSISTANT DIRECTOR OF UTILITIES

DRAWN	By	RLH	Checked	JEK
DESIGN	By	JEK	Checked	JEK
QUANTITIES	By		Checked	
SCALE: AS NOTED				

CITY OF VACAVILLE
UTILITIES DEPARTMENT

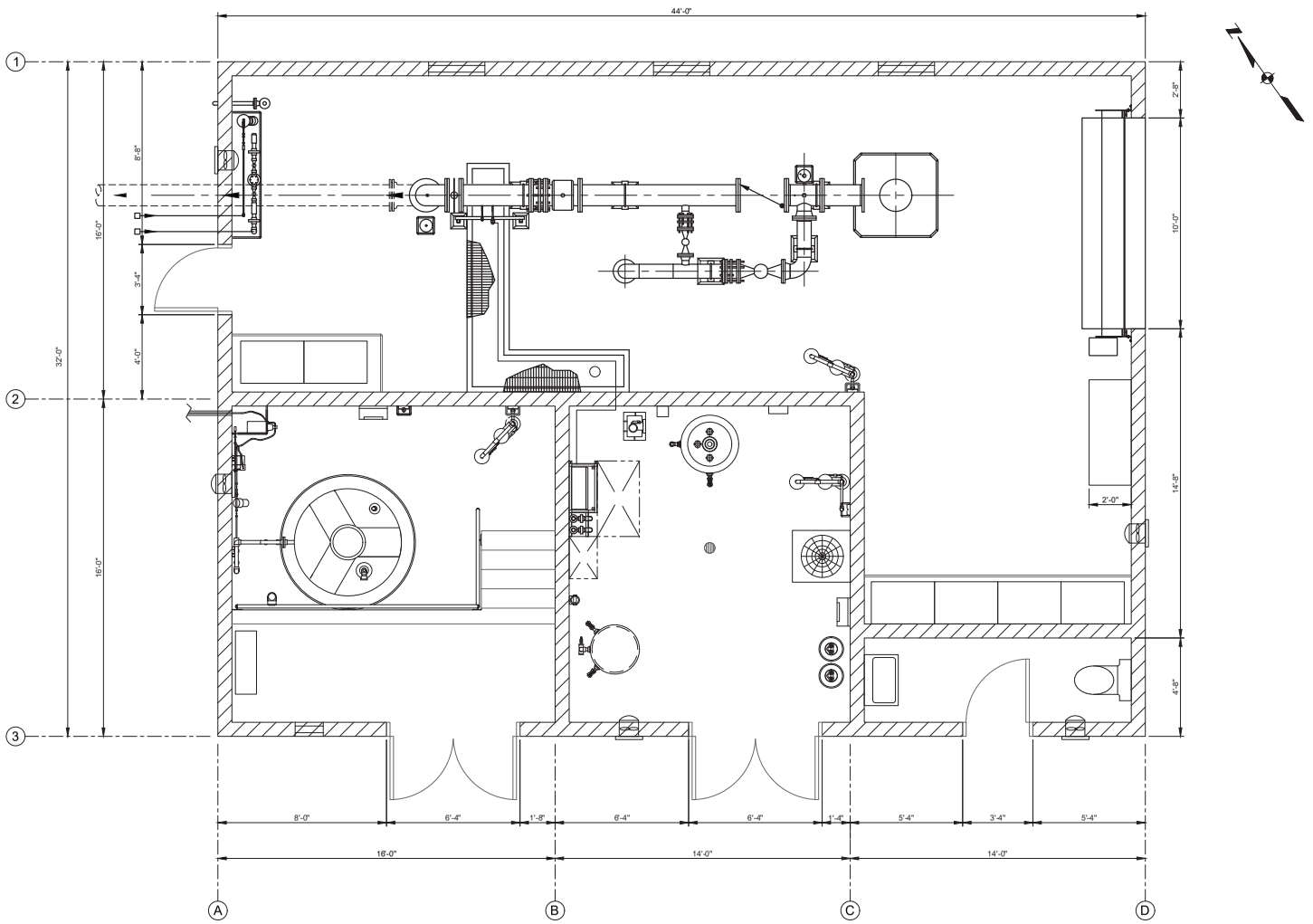
0 1 2 3 4
ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS

WELL 17 EQUIPPING (ALAMO DR.) PROJECT

GENERAL
TOPOGRAPHIC BOUNDARY SURVEY G-4

PLANS DATE:

DISREGARD PRINTS BEARING EARLIER PLOT DATES →	DATE PLOTTED	SHEET	OF
	10/03/19	4	



BUILDING FLOOR PLAN

0 2 4

3/8"=1'-0"

Kennedy Jenks

10850 GOLD CENTER DRIVE, SUITE 350
RANCHO CORDOVA, CA 95670

35% PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY

REGISTERED CIVIL ENGINEER _____ DATE

PLANS APPROVAL DATE

CITY OF VACAVILLE
UTILITIES DEPARTMENT
650 MERCHANT STREET
VACAVILLE, CA 95688

APPROVED BY:

ROYCE W. CUNNINGHAM R.C.E. 41985
DIRECTOR OF UTILITIES

RECOMMENDED APPROVAL BY:

STEPHEN L. SAWYER R.C.E. 30851
ASSISTANT DIRECTOR OF UTILITIES

DRAWN	By	MJ	Checked	JK
DESIGN	By	MP	Checked	TW
QUANTITIES	By		Checked	

SCALE: AS NOTED

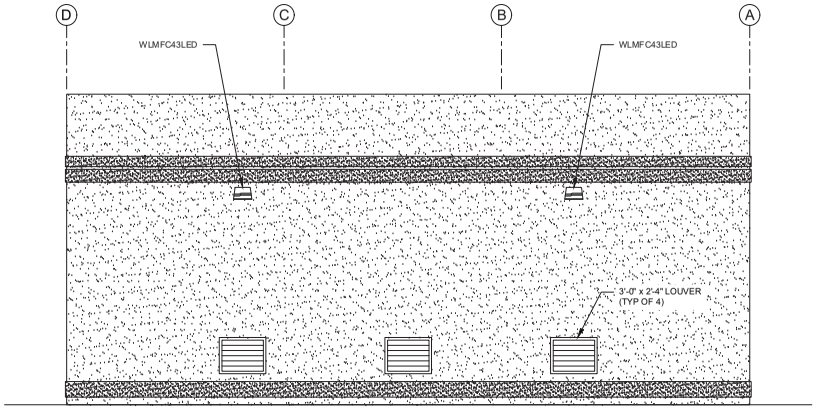
CITY OF VACAVILLE
UTILITIES DEPARTMENT

0 1 2 3 4
ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS

WELL 17 EQUIPPING PROJECT

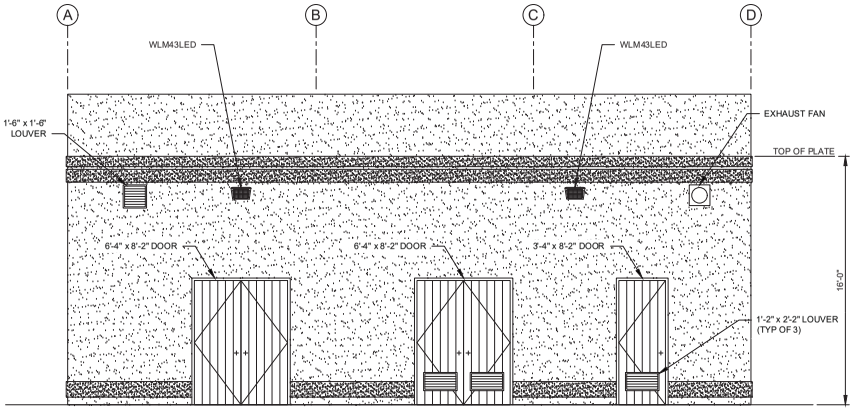
ARCHITECTURAL
BUILDING FLOOR PLAN A-2

PLANS DATE: JUNE 2019	DISREGARD PRINTS BEARING EARLIER PLOT DATES →	DATE PLOTTED	SHEET	OF
		06/07/19	X	



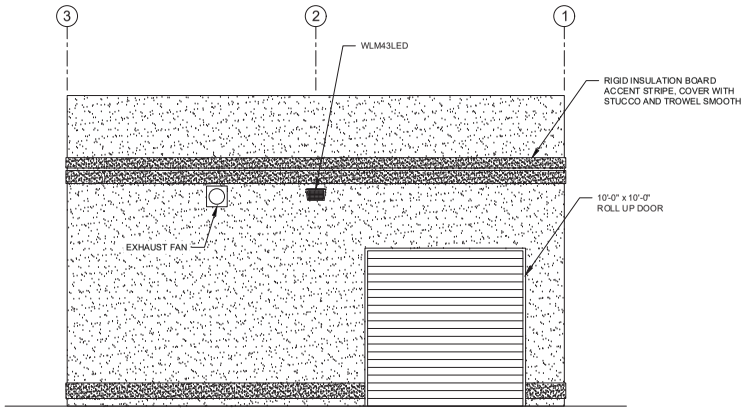
EAST ELEVATION

0 3 6
1/4"=1'-0"



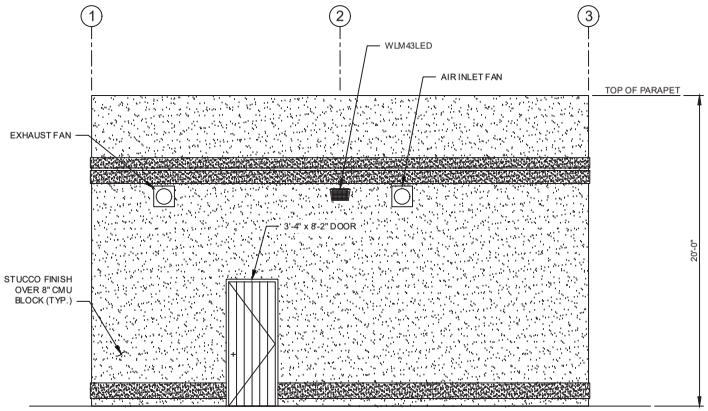
WEST ELEVATION

0 3 6
1/4"=1'-0"



SOUTH ELEVATION

0 3 6
1/4"=1'-0"



NORTH ELEVATION

0 3 6
1/4"=1'-0"

Kennedy Jenks

35% PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

CITY OF VACAVILLE
UTILITIES DEPARTMENT
650 MERCHANT STREET
VACAVILLE, CA 95688

APPROVED BY:

ROYCE W. CUNNINGHAM R.C.E. 41985
DIRECTOR OF UTILITIES

RECOMMENDED APPROVAL BY:

STEPHEN L. SAWYER R.C.E. 30851
ASSISTANT DIRECTOR OF UTILITIES

DRAWN	By MJ	Checked JEK	
DESIGN	By MP	Checked TLW	
QUANTITIES	By	Checked	

SCALE: AS NOTED

CITY OF VACAVILLE
UTILITIES DEPARTMENT

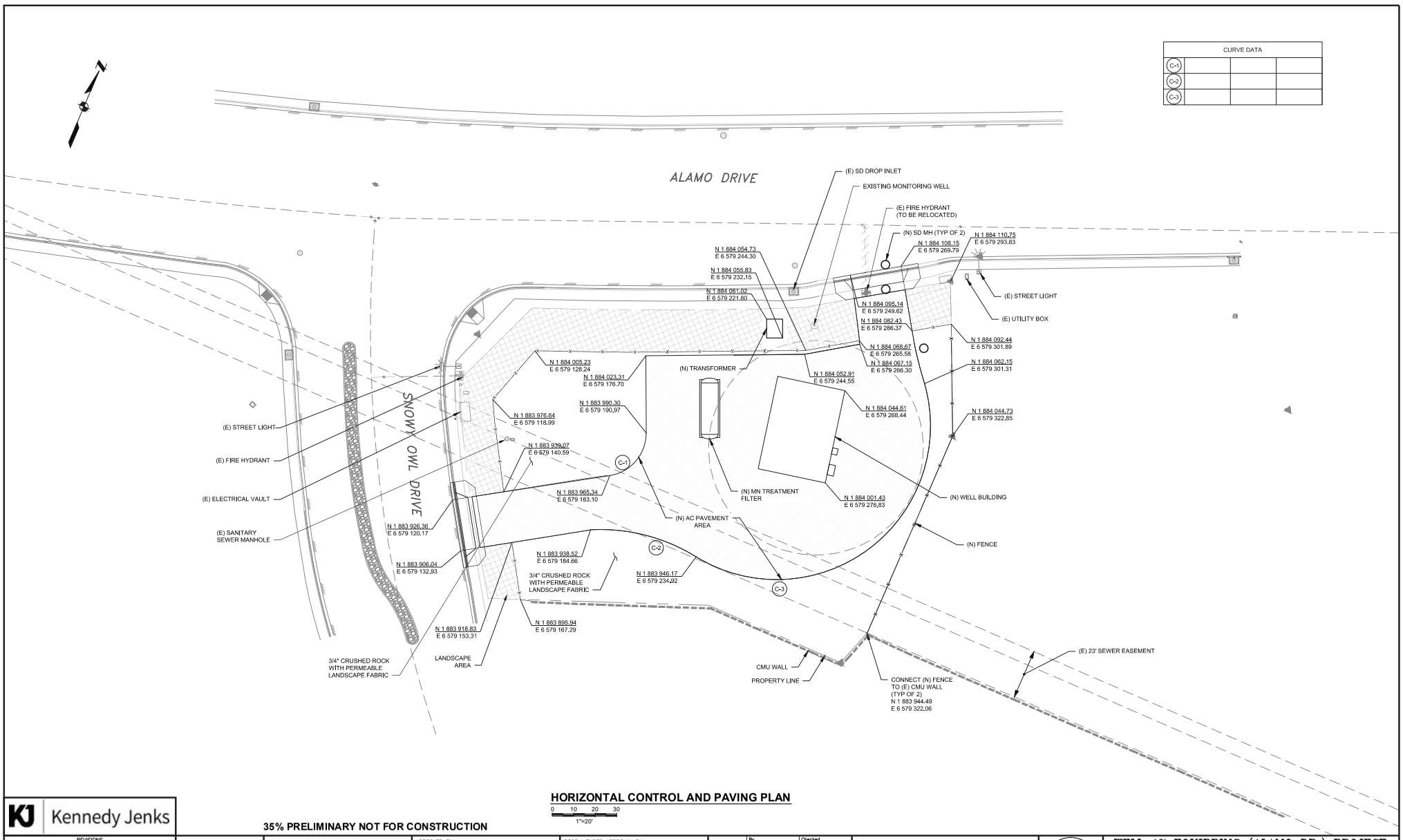
0 1 2 3 4
ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS

WELL 17 EQUIPPING (ALAMO DR.) PROJECT

ARCHITECTURAL
BUILDING EXTERIOR ELEVATIONS A-3

PLANS DATE: AUGUST 2019

DISREGARD PRINTS BEARING EARLIER PLOT DATES	DATE PLOTTED	SHEET	OF
	10/03/19	X	



HORIZONTAL CONTROL AND PAVING PLAN

0 10 20 30

1"=20'

35% PRELIMINARY NOT FOR CONSTRUCTION

Kennedy Jenks

REVISIONS			
NO.	DATE	DESCRIPTION	BY

REGISTERED CIVIL ENGINEER _____ DATE

PLANS APPROVAL DATE

CITY OF VACAVILLE
UTILITIES DEPARTMENT
650 MERCHANT STREET
VACAVILLE, CA 95688

APPROVED BY:

ROYCE W. CUNNINGHAM R.C.E. 41985
DIRECTOR OF UTILITIES

RECOMMENDED APPROVAL BY:

STEPHEN L. SAWYER R.C.E. 30851
ASSISTANT DIRECTOR OF UTILITIES

DRAWN	By	RLH	Checked	JEK
DESIGN	By	JEK	Checked	TLW
QUANTITIES	By		Checked	

SCALE: AS NOTED

CITY OF VACAVILLE
UTILITIES DEPARTMENT

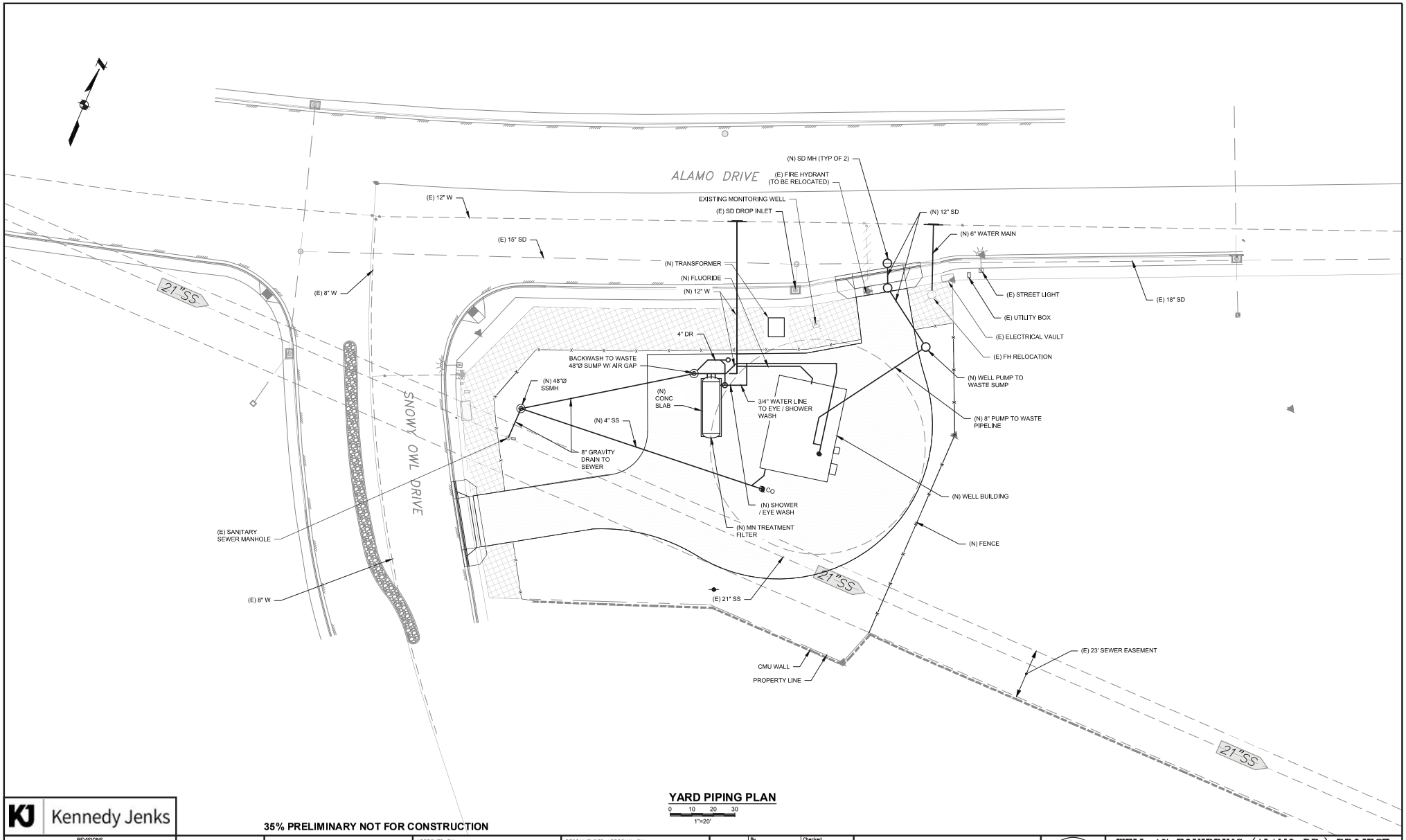
0 1 2 3 4
ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS

WELL 17 EQUIPPING (ALAMO DR.) PROJECT

CIVIL
HORIZONTAL CONTROL AND PAVING PLAN C-1

PLANS DATE: AUGUST 2019

DISREGARD PRINTS BEARING EARLIER PLOT DATES →	DATE PLOTTED	SHEET	OF
	10/03/19	X	



YARD PIPING PLAN

0 10 20 30

1"=20'

Kennedy Jenks

35% PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

CITY OF VACAVILLE
UTILITIES DEPARTMENT
650 MERCHANT STREET
VACAVILLE, CA 95688

APPROVED BY:

ROYCE W. CUNNINGHAM R.C.E. 41985
DIRECTOR OF UTILITIES

RECOMMENDED APPROVAL BY:

STEPHEN L. SAWYER R.C.E. 30851
ASSISTANT DIRECTOR OF UTILITIES

DRAWN	By	RLH	Checked	JEK
DESIGN	By	JEK	Checked	TLW
QUANTITIES	By		Checked	

SCALE: AS NOTED

CITY OF VACAVILLE
UTILITIES DEPARTMENT

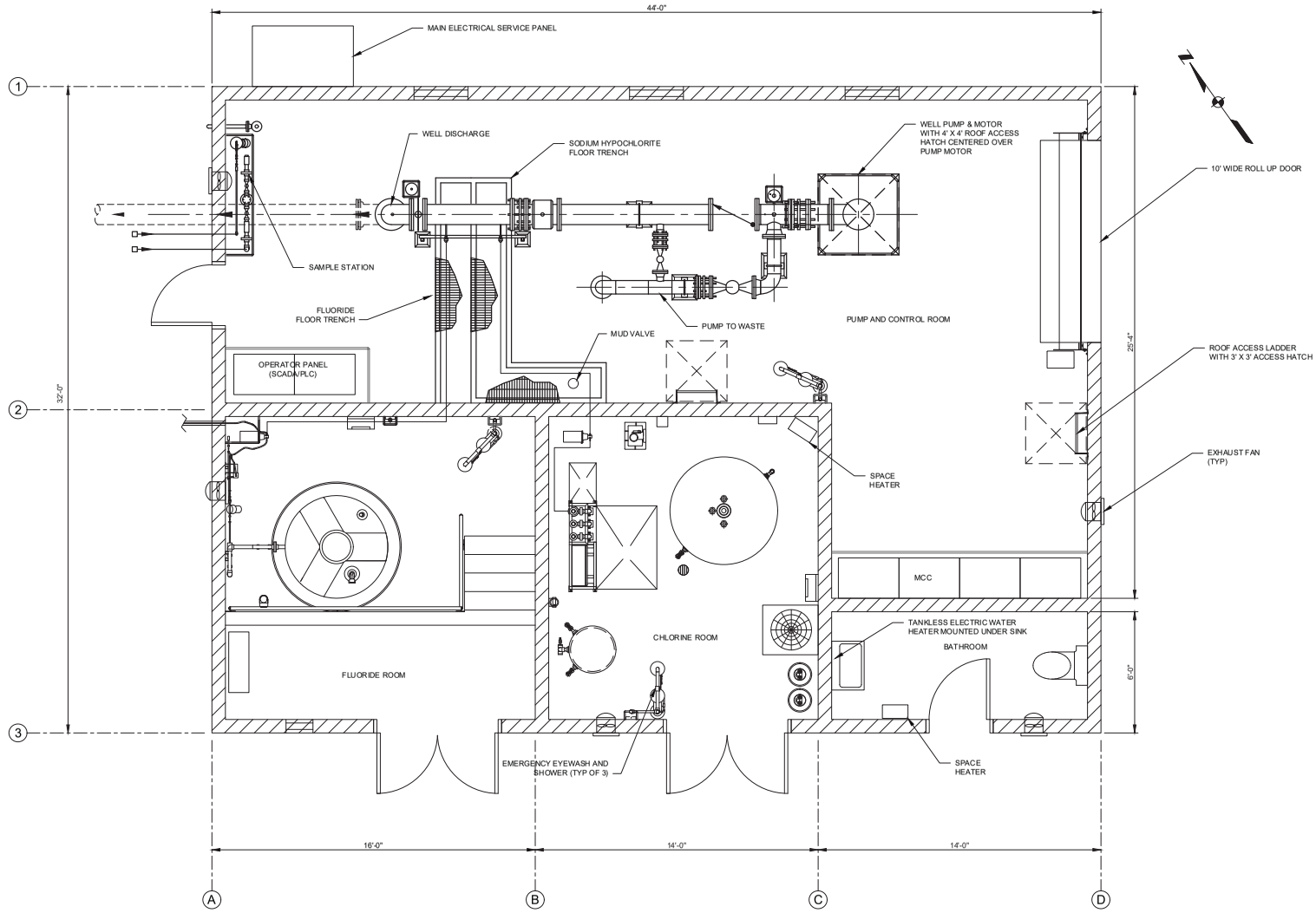
0 1 2 3 4
ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS

WELL 17 EQUIPPING (ALAMO DR.) PROJECT

CIVIL
YARD PIPING PLAN C-2

PLANS DATE: AUGUST 2019

DISREGARD PRINTS BEARING EARLIER PLOT DATES →	DATE PLOTTED	SHEET	OF
	10/03/19	X	



MECHANICAL FLOOR PLAN

0 2 4
3/8"=1'-0"

Kennedy Jenks
10850 GOLD CENTER DRIVE, SUITE 350
RANCHO CORDOVA, CA 95670

REVISIONS			
NO.	DATE	DESCRIPTION	BY

35% PRELIMINARY NOT FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER — STEPHEN L. WILLIAMS — No. 39104 Exp. 06/30/21 — CIVIL — STATE OF CALIFORNIA

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

CITY OF VACAVILLE
UTILITIES DEPARTMENT
650 MERCHANT STREET
VACAVILLE, CA 95688

APPROVED BY:

ROYCE W. CUNNINGHAM R.C.E. 41985
DIRECTOR OF UTILITIES

RECOMMENDED APPROVAL BY:

STEPHEN L. SAWYER R.C.E. 30851
ASSISTANT DIRECTOR OF UTILITIES

DRAWN	By	MJS	Checked	JK
DESIGN	By	JK	Checked	TW
QUANTITIES	By		Checked	

SCALE: AS NOTED

CITY OF VACAVILLE
UTILITIES DEPARTMENT

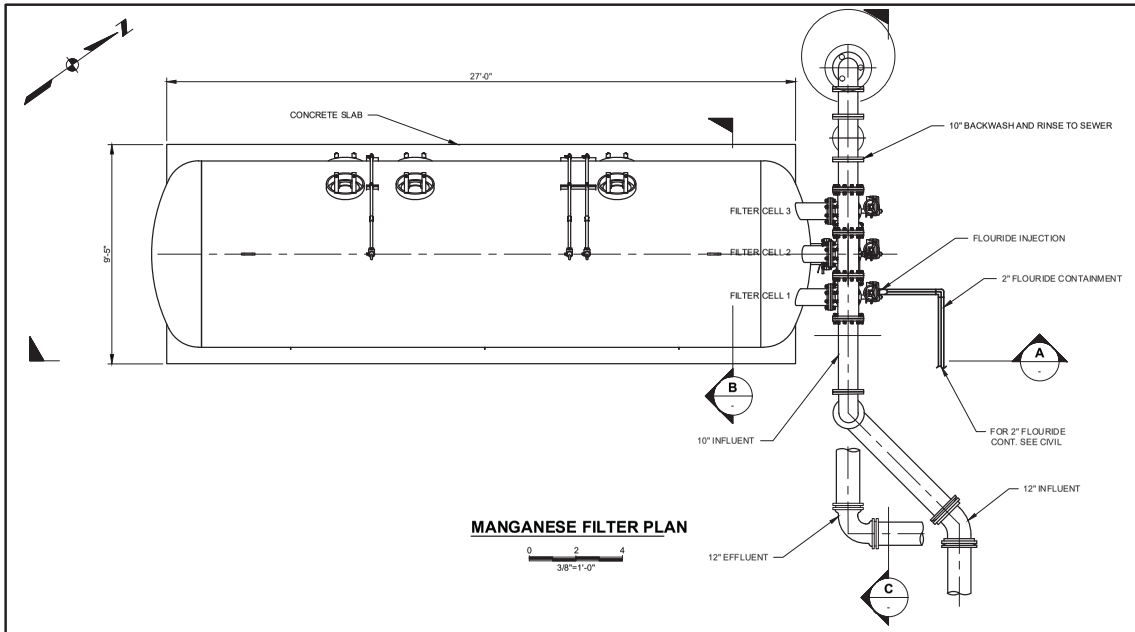
0 1 2 3 4
ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS

WELL 17 EQUIPPING (ALAMO DR.) PROJECT

MECHANICAL
BUILDING FLOOR PLAN M-1

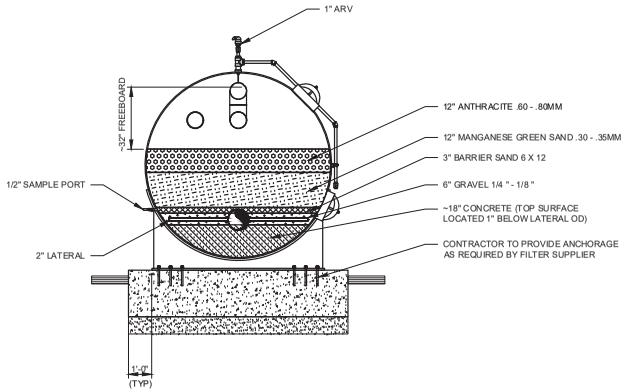
PLANS DATE: JUNE 2019

DISREGARD PRINTS BEARING EARLIER PLOT DATES →	DATE PLOTTED	SHEET	OF
	06/13/19	X	



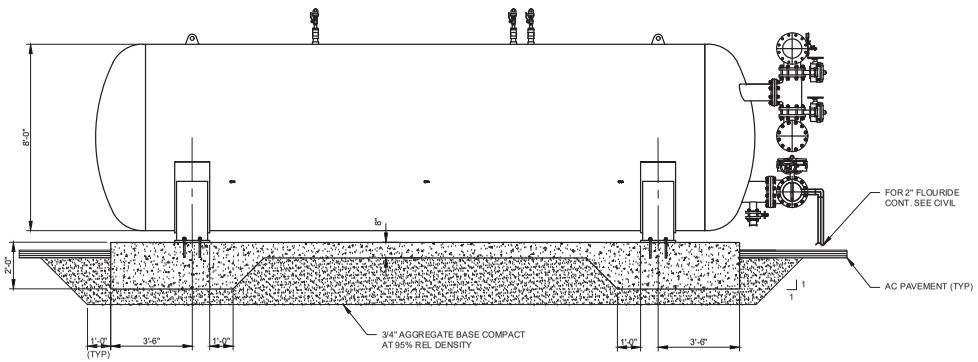
MANGANESE FILTER PLAN

0 2 4
3/8"=1'-0"



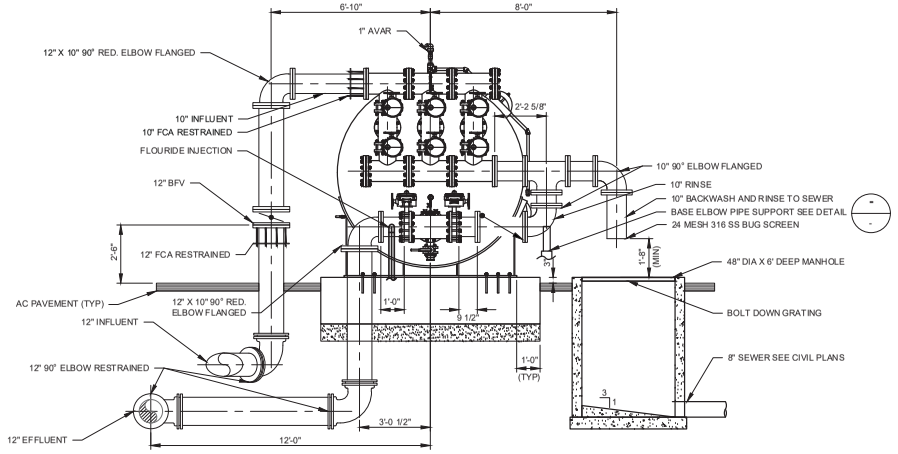
SECTION B

0 2 4
3/8"=1'-0"



SECTION A

0 2 4
3/8"=1'-0"



SECTION C

0 2 4
3/8"=1'-0"

Kennedy Jenks
10850 GOLD CENTER DRIVE, SUITE 350
RANCHO CORDOVA, CA 95670

REVISIONS			
NO.	DATE	DESCRIPTION	BY

REGISTERED PROFESSIONAL ENGINEER — GREGORY L. WILLIAMS — No. 39104 Exp. 06/30/21 — CIVIL — STATE OF CALIFORNIA

35% PRELIMINARY NOT FOR CONSTRUCTION

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

CITY OF VACAVILLE
UTILITIES DEPARTMENT
650 MERCHANT STREET
VACAVILLE, CA 95688

APPROVED BY:

ROYCE W. CUNNINGHAM — R.C.E. 41985
DIRECTOR OF UTILITIES

RECOMMENDED APPROVAL BY:

STEPHEN L. SAWYER — R.C.E. 30851
ASSISTANT DIRECTOR OF UTILITIES

DRAWN	By	MJS	Checked	JEK
DESIGN	By	JEK	Checked	TLW
QUANTITIES	By		Checked	

SCALE: AS NOTED

CITY OF VACAVILLE
UTILITIES DEPARTMENT

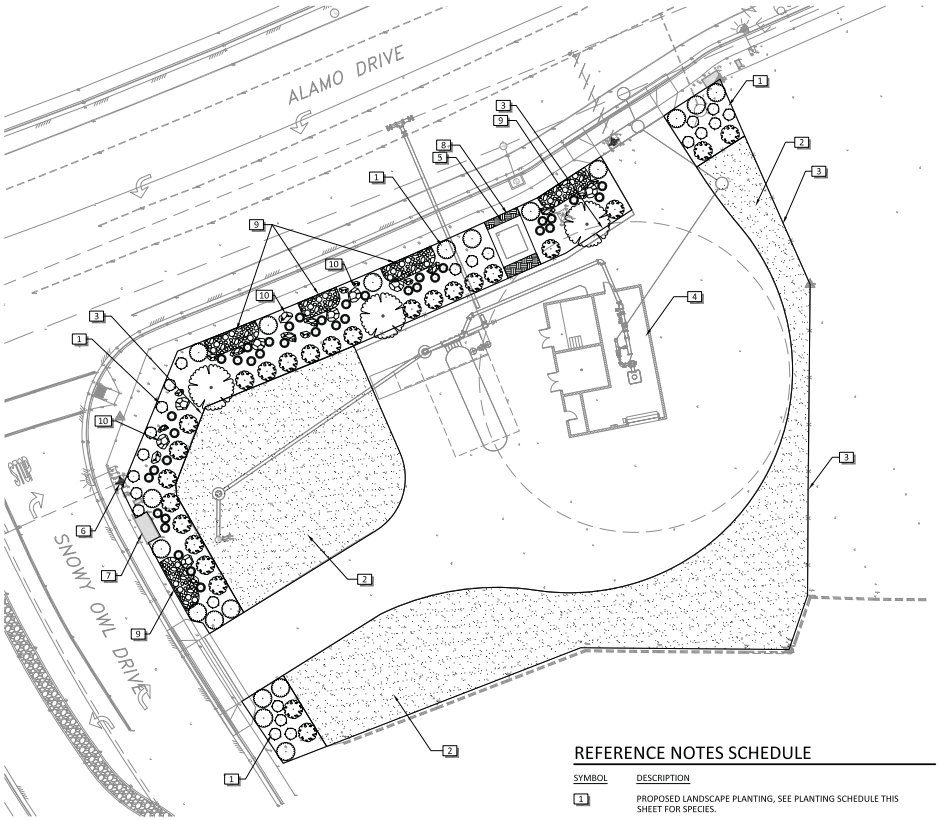
0 1 2 3 4
ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS

WELL 17 EQUIPPING (ALAMO DR.) PROJECT

MECHANICAL — M-2
MANGANESE FILTER PLAN, SECTIONS AND DETAILS

PLANS DATE: AUGUST 2019

DISREGARD PRINTS BEARING EARLIER PLOT DATES →	DATE PLOTTED	SHEET	OF
	08/19/19	X	



PLANT SCHEDULE

TREES	CODE	BOTANICAL NAME	COMMON NAME	CONT	WATER USE	HXW	QTY
	LAU ANG	LAURUS NOBILIS `ANGUSTIFOLIA`	WILLOW LEAF BAY	15 GAL	L	20`X15`	3

GROUNDCOVERS	CODE	BOTANICAL NAME	COMMON NAME	CONT	WATER USE	HXW
	BAC PIL	BACCHARIS PILULARIS	DWARF COYOTE BRUSH	5 GAL	L	2`X6`
	COT MIC	COTONEASTER MICROPHYLLUS	ROCKSPRAY COTONEASTER	1 GAL	L	2`X6`
	MYO PAR	MYOPORUM PARVIFOLIUM	TRAILING MYOPORUM	1 GAL	L	6"X6`

ORNAMENTAL GRASSES	CODE	BOTANICAL NAME	COMMON NAME	CONT	WATER USE	HXW
	CAL KAR	CALAMAGROSTIS X ACUTIFLORA `KARL FOERSTER`	FEATHER REED GRASS	1 GAL	L	4`X3`
	MUH DUB	MUHLENBERGIA DUBIA	PINE MUHLY	1 GAL	L	3`X3`
	MUH RIG	MUHLENBERGIA RIGENS	DEER GRASS	1 GAL	L	4`X4`

SHRUBS - LARGE	CODE	BOTANICAL NAME	COMMON NAME	CONT	WATER USE	HXW
	ARC HOW	ARCTOSTAPHYLOS DENSIFLORA `HOWARD MCMINN`	HOWARD MCMINN MANZANITA	5 GAL	L	5`X6`
	PHO WAV	PHORMIUM TENAX `YELLOW WAVE`	NEW ZEALAND FLAX	5 GAL	L	5`X5`
	RHA MIN	RHAPHIOLEPIS UMBELLATA `MINOR`	YEDDA HAWTHORN	5 GAL	L	4`X4`

SHRUBS - MEDIUM	CODE	BOTANICAL NAME	COMMON NAME	CONT	WATER USE	HXW
	CAL BE6	CALLISTEMON VIMINALIS `BETTER JOHN`	DWARF WEEPING BOTTLE BRUSH	1 GAL	L	3`X3`
	CIS WH2	CISTUS X HYBRIDUS	WHITE ROCKROSE	1 GAL	L	3`X6`
	DIE VEG	DIETES VEGETA	AFRICAN IRIS	1 GAL	L	3`X3`

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
1	PROPOSED LANDSCAPE PLANTING, SEE PLANTING SCHEDULE THIS SHEET FOR SPECIES.
2	PROPOSED 3/4" CRUSHED ROCK SURFACE TREATMENT, SEE PLANTING DETAIL SHEET L1.1 DETAIL #4.
3	PROPOSED TUBULAR STEEL FENCE ALONG SITE.
4	PROPOSED NEW WELL BUILDING, SEE CIVIL PLANS.
5	PROPOSED TRANSFORMER, SEE CIVIL PLANS.
6	(E) FIRE HYDRANT
7	(E) ELECTRICAL VAULT
8	BARK MULCH, KEEP CLEAR FOR ACCESS AND MAINTENANCE.
9	COBBLE LANDSCAPE AREAS WITH 3" TO 6" SIZE SMOOTH COBBLE STONE WITH LARGER LANDSCAPE BOULDERS SET BEHIND, TYPICAL, SEE LANDSCAPE PLANTING DETAIL SHEET L1.1 DETAIL #3 FOR COBBLE AND DETAIL #5 FOR BOULDER INSTALLATION.
10	LANDSCAPE BOULDER, (STAND ALONE), TYPICAL. SEE DETAIL #5 SHEET L1.1 FOR INTALLATION.

NORTH

20 10 0 20 40

SCALE: 1" = 20'

DATE SIGNED: _____

THESE DRAWINGS ARE NOT CONSIDERED FINAL UNTIL THE ENGINEER'S SEAL BELOW HAS BEEN SIGNED AND DATED.

LICENSED LANDSCAPE ARCHITECT
MICHAEL G. ENGLE No. 4672
Signature
Exp. 31-20
Renewal Date
Date
STATE OF CALIFORNIA

PRELIMINARY

CECWEST.COM
Project Planning & Civil Engineering & Landscape Architecture
Sacramento Office
2120 20th Street, Suite Three
Sacramento, CA 95818
(916) 455-2026
Davis Office
2940 Spafford Street, Suite 200
Davis, CA 95618
(530) 759-2026

35% PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY

REGISTERED CIVIL ENGINEER _____ DATE

PLANS APPROVAL DATE

CITY OF VACAVILLE
UTILITIES DEPARTMENT
650 MERCHANT STREET
VACAVILLE, CA 95688

APPROVED BY:

ROYCE W. CUNNINGHAM R.C.E. 41985
DIRECTOR OF UTILITIES

RECOMMENDED APPROVAL BY:

STEPHEN L. SAWYER R.C.E. 30851
ASSISTANT DIRECTOR OF UTILITIES

	By	Checked
DRAWN	BK	ME
DESIGN	BK	ME
QUANTITIES	BK	ME

SCALE: 1" = 20'

CITY OF VACAVILLE
UTILITIES DEPARTMENT

0 1 2 3 4
ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS

WELL 17 EQUIPPING (ALAMO DRIVE) PROJECT

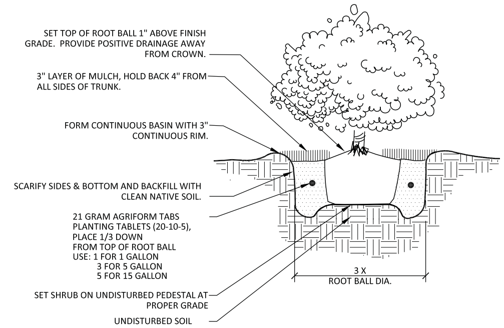
LANDSCAPE PLANTING PLAN

PLANS DATE: 06/13/19

DISREGARD PRINTS BEARING EARLIER PLOT DATES →	DATE PLOTTED	SHEET	OF
	06/13/19	L1.0	2

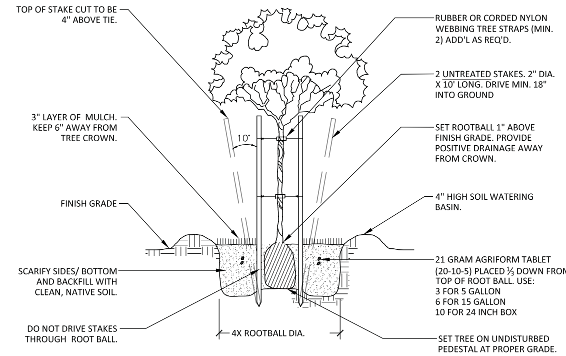
PLANTING NOTES

1. WORK INCLUDES ALL LABOR, MATERIAL, EQUIPMENT AND APPLIANCES NECESSARY TO COMPLETE SOIL PREPARATION AND WEED CONTROL, FINE GRADING, PLANTING, AND MAINTENANCE PERIOD.
2. ALL WORK SHOWN ON PLANTING SHEETS SHALL BE PERFORMED PER DRAWINGS AND SPECIFICATIONS.
3. LANDSCAPE CONTRACTOR SHALL VERIFY PLANT QUANTITIES FROM LANDSCAPE PLAN. IF THERE IS A DISCREPANCY BETWEEN THE PLAN & THE LEGEND, THE PLAN SHALL GOVERN.
4. NO PLANTING SHALL BE STARTED UNTIL FINE GRADING AND IRRIGATION SYSTEM HAVE BEEN COMPLETED AND APPROVED BY THE PROJECT REPRESENTATIVE.
5. LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN THE EVENT OF PLANT UNAVAILABILITY IMMEDIATELY AFTER BID AWARD(S). ANY SUBSTITUTIONS MUST BE REQUESTED IN WRITING AND SUBMITTED TO THE LANDSCAPE ARCHITECT FOR APPROVAL.
6. ALL PLANT MATERIAL SHALL MEET SIZE SPECIFICATIONS AS SHOWN ON THE PLANT LEGEND, AND SHALL BE CONTAINER GROWN, HEALTHY, FULL, AND SHALL BE OF THE FIRST RATE QUALITY FOR THE SPECIES. CLEARLY LABEL REPRESENTATIVES OF EACH PLANT SPECIES OR CULTIVAR WITH BOTANICAL NAME.
7. PRIOR TO PLANTING OR GRADING, ASCERTAIN THE LOCATION OF ALL UNDERGROUND UTILITY LINES. PROMPTLY BRING ANY CONFLICT BETWEEN THE LOCATION OF UNDERGROUND LINES AND PLANT MATERIAL TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR APPROPRIATE ADJUSTMENT.
8. THE LOCATIONS OF TREES AND SHRUBS SHALL BE ADJUSTED IN THE FIELD TO ACCOMMODATE EXISTING & NEW UTILITIES, LIGHTS, SPRINKLERS, ETC. MAINTAIN 5' MINIMUM CLEARANCE BETWEEN ALL NEW TREES AND UTILITIES (EXISTING AND PROPOSED). ALL SHRUBS AT MATURITY SHALL HAVE A CLEARANCE OF THREE FEET (3') AROUND ANY ELECTRICAL BOXES, FIRE HYDRANTS, OR OTHER UTILITY BOXES.
9. ALL PLANTER AREAS SHALL BE GRADED AND PLANTED FOR POSITIVE DRAINAGE AWAY FROM STRUCTURES, WALLS & FENCES.
10. SET FINISH SOIL GRADES AS NOTED ON DETAILS FOR SHRUBS & GROUNDCOVER AREAS. AFTER PLANTING, CORRECT ANY DISTURBED GRADES AND RETURN ENTIRE AREA TO FINISH GRADE.
11. CONDUCT PLANTING OPERATIONS UNDER FAVORABLE WEATHER CONDITIONS, EXCEPT WHEN GROUND IS TOO WET, AS DETERMINED BY THE LANDSCAPE ARCHITECT.
12. THOROUGHLY WATER ALL PLANTS AT TIME OF PLANTING, TAKING CARE NOT TO COVER CROWNS OF PLANTS WITH SOIL. KEEP ROOT BALLS ADEQUATELY MOIST UNTIL TIME OF ACCEPTANCE.
13. PRE-EMERGENT WEED CONTROL TO BE APPLIED TO ALL PLANTING AREAS PRIOR TO PLANTING. CONTRACTOR SHALL APPLY AS RECOMMENDED PER MANUFACTURER'S RECOMMENDATIONS.
14. BARK MULCH SHALL BE SPREAD IN ALL PLANTER AREAS WITHIN 24 HOURS AFTER ANY PLANTING TO UNIFORMLY COVER ENTIRE PLANTING AREA. MULCH IN ALL OTHER LANDSCAPE AREAS SHALL BE 3" DEPTH OF WALK-ON BARK FREE OF LARGE WOODY PIECES, SOIL, SEEDS, STONES, STICKS, DEBRIS OR OTHER FOREIGN MATERIALS. CONTRACTOR SHALL SUBMIT MULCH SAMPLES FOR APPROVAL BY THE LANDSCAPE ARCHITECT.
15. PROTECT PLANTS FROM DAMAGE OF ANY KIND, INCLUDING HEAT, DESICCATION, AND MAINTAIN PLANTS IN A HEALTHY AND VIGOROUS CONDITION FROM TIME OF ARRIVAL AT SITE THROUGH FINAL ACCEPTANCE. REPLACE ALL DEAD OR DAMAGED PLANTS AND ALL PLANTS NOT IN A VIGOROUS, THRIVING CONDITION AS DETERMINED BY THE LANDSCAPE ARCHITECT WITHOUT COST TO THE OWNER AS SOON AS SEASONAL CONDITIONS PERMIT. REPLACE WITH PLANT MATERIAL OF COMPARABLE QUALITY AND SIZE TO THAT WHICH WAS ORIGINALLY INSTALLED.
16. UPON INITIAL COMPLETION OF THE WORK, CONTACT THE LANDSCAPE ARCHITECT TO PROVIDE A PRELIMINARY REVIEW OF ALL PLANTING AND A PUNCH LIST OF INCOMPLETE OR UNSATISFACTORY ITEMS. ONLY SATISFACTORY COMPLETION OF WORK AND PUNCH LIST ITEMS AS DETERMINED BY THE LANDSCAPE ARCHITECT SHALL ESTABLISH THE BEGINNING OF THE 90-DAY MAINTENANCE PERIOD.
17. CONTINUOUSLY MAINTAIN ALL AREAS INCLUDED IN THE CONTRACT DURING THE PROGRESS OF THE WORK, THROUGH THE 90-DAY MAINTENANCE PERIOD, AND UNTIL FINAL ACCEPTANCE OF THE WORK. WATER, PRUNE, WEED CONTROL, CULTIVATE, MULCH, PEST CONTROL, RESET PLANTS TO PROPER GRADES OR UPRIGHT POSITION, RESTORE WATERING BASINS, REMOVE DEBRIS AND PROVIDE ALL OTHER CARE NEEDED FOR PROPER GROWTH AND APPEARANCE OF THE PLANTS.
18. KEEP ALL WALKS, CURBS, AND GUTTERS CLEAR OF DEBRIS, MUD, DUST, AND STANDING WATER BY SWEEPING, MOPPING OR HOSING DOWN AS REQUIRED TO MAINTAIN CLEANLINESS THROUGHOUT. AT COMPLETION OF 90-DAY MAINTENANCE PERIOD, ALL AREAS INCLUDED IN THE CONTRACT SHALL BE CLEAN AND FREE OF DEBRIS AND WEEDS. ALL PLANT MATERIALS SHALL BE LIVE, HEALTHY, AND FREE OF INFESTATION. IF ANY ITEM OR PORTION OF THE CONTRACT WORK IS NOT ACCEPTABLE TO THE OWNER AT THE TIME OF FINAL REVIEW, MAINTAIN ALL AREAS INCLUDED IN THE CONTRACT FOR ANY ADDITIONAL PERIOD OF TIME AS MAY BE REQUIRED TO REPAIR DEFECTIVE ITEM OR PORTION.
19. PLANT SYMBOLS AS SHOWN ON THE PLATING PLANT ARE SIZED AND SPACED BASED ON GROWTH TO MATURE SIZE. CONTRACTOR SHALL ENSURE SPACING/OFFSETS TO OTHER SHRUBS, CONCRETE EDGES, PROPERTY LINES, ETC. ARE PER SPACING GUIDELINES SHOWN IN THE THE PLANTING LEGEND.



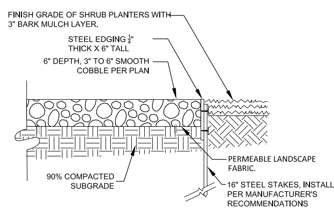
NOTES:
1. NO ROCKS LARGER THAN 1" ARE PERMITTED IN BACKFILL MIX.

1 TYPICAL SHRUB PLANTING
SECTION — NOT TO SCALE



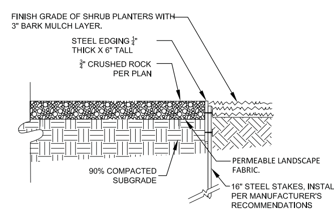
NOTES:
1. STAKES TO BE SET PERPENDICULAR TO PREVAILING WIND, INTO UNDISTURBED SOIL, PLACED 12" MIN FROM TREE TRUNK.
2. REMOVE NURSERY STAKE AFTER TREE IS PLANTED AND RESTAKED AND TIED (SEE ABOVE).
3. TREE TIES MADE OF FLEXIBLE MATERIAL, TIED JUST ABOVE POINT WHERE TREE BENDS NATURALLY WHEN HELD BY HAND. DO NOT ALLOW TREE TO RUB AGAINST STAKES.
4. WHEN RESTAKING TREES, DRIVE STAKES AT ANGLES SHOWN. CUT OFF (AT TOP) TO HEIGHT THAT STILL SUPPORTS TRUNK OF TREE BUT ALLOWS SOME MOVEMENT OF TOP.
5. REMOVE ALL STAKES AND TIES WHEN TREE CAN STAND BY ITSELF.

2 TYPICAL TREE PLANTING
SECTION — NOT TO SCALE



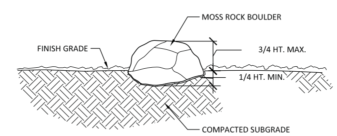
NOTE:
1. CONTRACTOR TO SUBMIT SAMPLE OF COBBLE TO LANDSCAPE ARCHITECT FOR APPROVAL.
2. COBBLE SHALL BE 3" TO 6", SMOOTH & ROUNDED, MIX OF GRAY COLORS, ALL SAME TYPE OF ROCK.
3. INSTALL PERMEABLE LANDSCAPE FABRIC UNDER COBBLE ONLY AND SECURE WITH NYLON STAPLE.

3 3" TO 6" SMOOTH COBBLE WITH STEEL EDGING
SECTION — NOT TO SCALE



NOTE:
CONTRACTOR TO SUBMIT SAMPLE OF CRUSHED ROCK TO LANDSCAPE ARCHITECT FOR APPROVAL. INSTALL CRUSHED ROCK FLUSH WITH TOP OF STEEL EDGING OR EXISTING PAVEMENT.

4 ¾" CRUSHED ROCK WITH STEEL EDGING
SECTION — NOT TO SCALE



NOTES:
1. REFER TO LANDSCAPE SITE PLANS FOR LOCATIONS.
2. BOULDERS SHALL BE LARGE MOSS ROCK FLAT TOP BOULDERS FROM CASTCADE ROCK.
3. BOULDER SIZE SHALL RANGE IN SIZE BETWEEN THE FOLLOWING SIZES (42"L X 24"W X 20-24"H) TO (30"L X 18-24"W X 18"H).
4. BOULDERS TO BE SELECTED BY OWNER REPRESENTATIVE.
5. BOULDERS SHALL BE PLACED BY THE CONTRACTOR UNDER SUPERVISION OF THE OWNER REPRESENTATIVE OR LANDSCAPE ARCHITECT.
6. BOULDERS SHALL BE GROUPED AS SHOWN ON PLAN, AND SET IN A NATURAL FASHION.
7. SET BOULDER 25% MIN. BELOW GRADE WITH NO ACUTE ANGLES BETWEEN ROCK FACE AND FINISH GRADE.
8. PLACEMENT OF BOULDERS SHALL NOT INTERFERE WITH IRRIGATION EMITTERS OR EQUIPMENT AND DRAINAGE PATTERNS.
9. HAND COMPACT SOIL DIRECTLY BELOW BOULDER. TAMP SOIL AROUND BOULDER PERIMETER TO HOLD BOULDER IN PLACE.

5 LANDSCAPE BOULDER
SECTION — NOT TO SCALE

DATE SIGNED: ____
THESE DRAWINGS ARE NOT CONSIDERED FINAL UNTIL THE ENGINEER'S SEAL BELOW HAS BEEN SIGNED AND DATED.

LICENSED LANDSCAPE ARCHITECT — MICHAEL G. ENGLE No. 4672 — Signature — 7-31-20 Renewal Date — Date — STATE OF CALIFORNIA — PRELIMINARY

CUNNINGHAM ENGINEERING — CECWEST.COM
Project Planning ▪ Civil Engineering ▪ Landscape Architecture
Sacramento Office ▪ 2120 20th Street, Suite Three, Sacramento, CA 95818, (916) 455-2026
Davis Office ▪ 2940 Spafford Street, Suite 200, Davis, CA 95618, (530) 758-2026

35% PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS			
NO.	DATE	DESCRIPTION	BY

REGISTERED CIVIL ENGINEER — DATE
PLANS APPROVAL DATE
CITY OF VACAVILLE, UTILITIES DEPARTMENT, 650 MERCHANT STREET, VACAVILLE, CA 95688

APPROVED BY: ROYCE W. CUNNINGHAM, R.C.E. 41985, DIRECTOR OF UTILITIES
RECOMMENDED APPROVAL BY: STEPHEN L. SAWYER, R.C.E. 30851, ASSISTANT DIRECTOR OF UTILITIES

	By	Checked
DRAWN	BK	ME
DESIGN	BK	ME
QUANTITIES	BK	ME
SCALE: 1" = 20'		

CITY OF VACAVILLE
UTILITIES DEPARTMENT
ORIGINAL SCALE IS IN INCHES FOR REDUCED PLANS

WELL 17 EQUIPPING (ALAMO DRIVE) PROJECT
LANDSCAPE PLANTING DETAILS
PLANS DATE: 06/13/19
DISREGARD PRINTS BEARING EARLIER PLOT DATES → DATE PLOTTED 06/13/19 — SHEET L1.1 — OF 2

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